

Rock Products

DEVOTED TO
Concrete and Manufactured
Building Materials

Volume XIII.

CHICAGO, ILL., DECEMBER 22, 1913.

Number 6.

CAROLINA PORTLAND CEMENT COMPANY

We are the largest distributors of Portland Cement, Lime Plaster, Fire-brick and General Building Material in the Southern States, and have stocks of Standard Brands at all of the Atlantic and Gulf Seaports, and at our interior mills and warehouses, for prompt and economical distribution to all Southern territory. Write for our delivered prices anywhere. Also Southern agents for the "Dehydratine's" waterproofing material. "Universal," "Acme" and "Electrod" Brands Ready Roofing. Get our prices.

Charleston, S. C. Birmingham, Ala. Atlanta, Ga. New Orleans, La.

DEXTER Portland Cement
THE NEW STANDARD
Sole Agents SAMUEL H. FRENCH & CO., Philadelphia



UNION MINING COMPANY

Manufacturers of the Celebrated

MOUNT SAVAGE
FIRE BRICK
GOVERNMENT STANDARD

DEVOTE a special department to the manufacture of Brick particularly adapted both physically and chemically to

Lime Kiln and
Cement Kiln
Construction

Large stock carried. Prompt shipments made. Write for quotations on Standard and Special shapes, to

UNION MINING CO.
Mount Savage, Md.
CAPACITY, 60,000 PER DAY
ESTABLISHED 1841

THE HOTEL UTAH
SALT LAKE CITY

Salt Lake City's new two million dollar hotel

"American Keene Cement" used.

Durability Strength Superiority
USE



"STRONGEST KEENE CEMENT KNOWN"

AMERICAN KEENE CEMENT CO., SIGURD, UTAH



CHICAGO BELTING COMPANY
PURE OAK TANNED LEATHER BELTING

RELIANCE and SEA LION WATERPROOF

The two brands of leather belting that represent the best in belt construction. Our catalog is yours for the asking.

CHICAGO BELTING CO., 113-125 N. Green Street, CHICAGO

Branches: New York, New Orleans, Portland, Ore., Los Angeles, Cal., Cleveland, Ohio.



Tannery, Niles, Mich.

SPECIAL FEATURES IN THIS NUMBER

The Golden Text	Page 27
Cement Manufacturers Meet	" 36
American Road Builders' Tenth Annual	" 22
Sand-Lime Brick Association Convention	" 42



Phoenix Portland Cement UNEXCELLED FOR
ALL USES.
Manufactured by
PHOENIX PORTLAND CEMENT CO.
NAZARETH, PA.

Sale Selling Agent, WILLIAM C. HARTRANT CEMENT CO.
Real Estate Trust Building, PHILADELPHIA, PENNSYLVANIA.

Ottawa Silica Co.'s Washed White Flint Sand

Is used for sawing stone in more than a dozen states. Cuts more and lasts longer than any other sand on the market. Unexcelled for Roofing, Facing Cement Blocks, White Plaster, etc. Freight rates and prices on application.

OTTAWA SILICA CO.

Ottawa, Ill.

Best Bros. Keene's Cement

"The Plaster That Stands Hard Knocks"

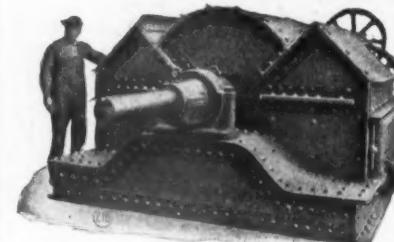
A cement noted for its quality and durability for over twenty-five years. Ideal for all high-grade interior finishing and decorative work. The one plaster that can be guaranteed for finish work on concrete.

Write for "The Inner Wall"



The Best Bros. Keene's Cement Co.
Estab. 1889
NEW YORK
Dept. A, Medicine Lodge, Kan.
(40)
CHICAGO

"PENNSYLVANIA" HAMMER CRUSHERS



For Pulverizing Lime-
stone, Lime, Cement Rock,
Marl, Shale, Etc.

Main Frame of steel, "Ball and Socket" Self aligning Bearings; forged Steel Shaft; Steel Cleat Liners; Gage adjustable by hand wheel while Crusher is running.
No other hammer Crusher has such a big Safety Factor.

PENNSYLVANIA CRUSHER CO.
Philadelphia
New York Pittsburgh



MILLS
Montreal
Hull
Belleville
Lakefield
Calgary

For Prices Any Where in
CANADA
Write or Wire Our Nearest Sales Office

Canada
Cement Company
LIMITED

Montreal - Toronto
Winnipeg - Calgary



Quality Service

2000% INCREASE IN 14 YEARS

Capacity 1898, 600,000 Barrels
Capacity 1912, 12,000,000 Barrels

The keynote of this unprecedented growth is the

QUALITY
of
Lehigh Portland Cement

Put Lehigh to any test and convince yourself of its supreme quality.

LEHIGH PORTLAND CEMENT CO.

Main Office
ALLEN TOWN, PA.

Western Office
CHICAGO, ILL.

VULCANITE PORTLAND CEMENT

"THE BRAND WITH A REPUTATION"

FOR EIGHTEEN YEARS

"VULCANITE" has received a preference

For SIDEWALKS

Therefore is Best

For CONCRETE HIGHWAYS

Books on each subject sent
FREE to parties applying from
East and Middle Atlantic States.

VULCANITE
Portland Cement
Company

PHILADELPHIA
NEW YORK



WHITEHALL

PORTLAND CEMENT

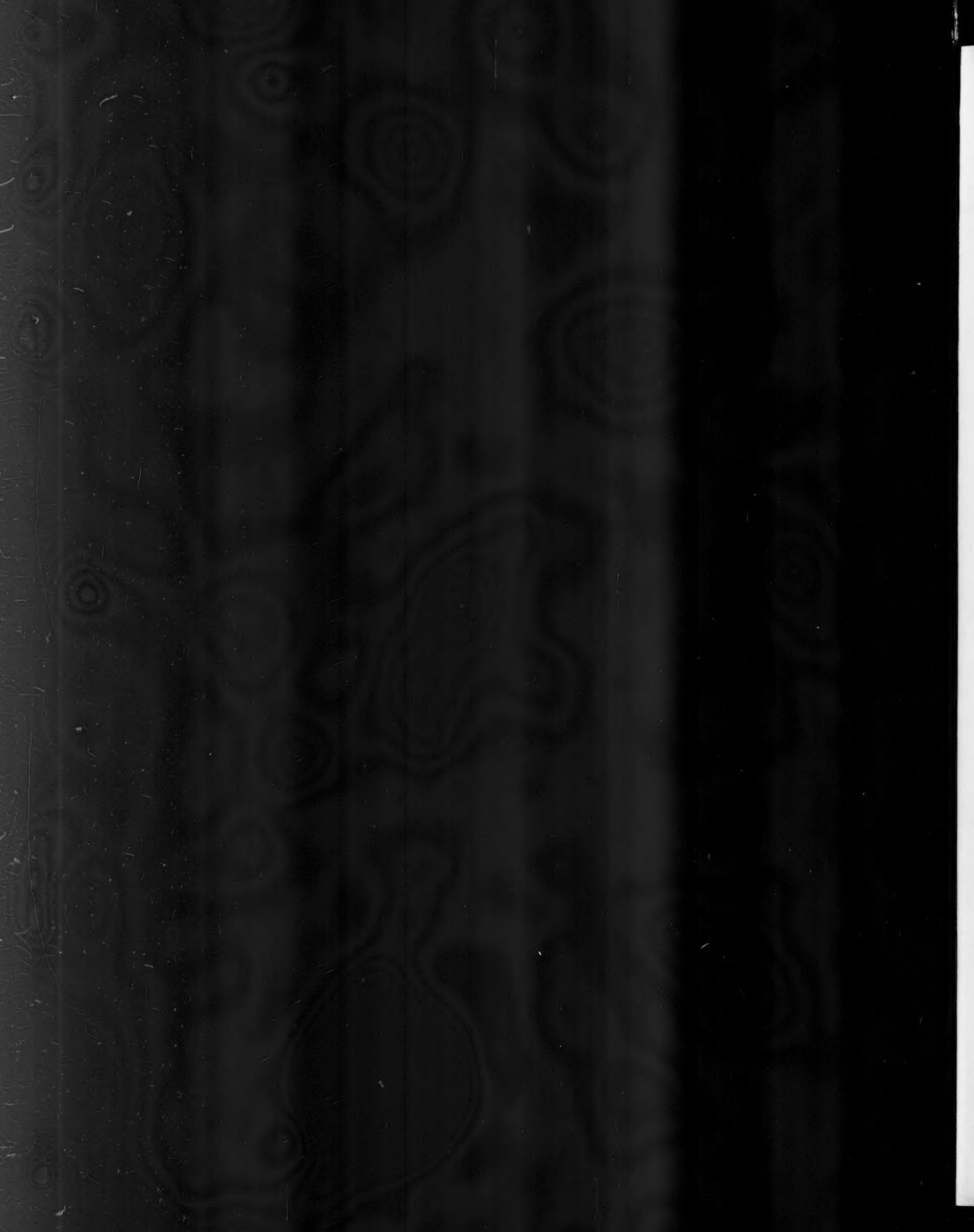
Whitehall Cement
Manufacturing Co.

1722 Land Title Bldg.
Philadelphia



Saylor's Portland Cement

Oldest American Portland
Used by the United States Government since 1876
COPLAY CEMENT MANUFACTURING CO.
SALES OFFICES:
Fifth Avenue Building, 1106 Land Title Bldg.,
NEW YORK CITY PHILADELPHIA



WHAT WOULD YOU DO WITHOUT TIME TABLES?

Can you picture the Grand Central Station in New York, if there were no time tables; no information bureau? Everybody scurrying around the room, questioning everybody else; numerous delays; worry; trouble---and, worst of all, the missing of trains.

The Grand Chicago Cement Show is to be held February 12 to 21, 1914, at the Coliseum---hundreds and thousands of people will be there. Something new will happen every day. The views of the exhibits, reports of the trade association meetings, the daily band program, etc., etc., will be of great interest to these visitors. The Daily ROCK PRODUCTS will supply their need; it will be the INFORMATION BUREAU of the show. Everybody will read it, both because they wish to and because they HAVE TO---just like the time table.

The Chicago Cement show is the only cement show of national scope to be held this year. Therefore all the live men of the industry will be concentrated in Chicago at this time. The mill supply men, the belting manufacturers, etc., will have this opportunity to place their names very intimately before the principal manufacturers of cement, lime, plaster, gypsum, sand and gravel, crushed rock, etc. The building material manufacturers will be able to talk with the dealers, contractors, engineers, etc.---as can also the other manufacturing branches of the industry. This is the grand opportunity of the year for everybody.

In conjunction with the big show, the following associations will hold their regular meetings in Chicago at this time: The National Builders' Supply Association; The National Lime Manufacturers' Association; The Illinois Association of Municipal Contractors; The National Association of Sand and Gravel Producers; The American Concrete Institute; The National Conference on Concrete Road Building; The Interstate Cement Tile Manufacturers' Association; The Illinois Lumber and Builders' Supply Association.

The Circulation of the Daily ROCK PRODUCTS will be complete, both at the show, at the Association Meetings and throughout the country. Thus an advertisement in the Dailies will strike home to the man to whom you want to sell your product. It will have the combined force of a personal circular and a trade journal advertisement. This is going to be a real salesman for you. Reserve space now in the INFORMATION BUREAU of the Show.

Don't Miss the Train or Your Prospective Customers Will Miss You

DAILY ROCK PRODUCTS, Ellsworth Bldg., Chicago, Ill.



Over 40 Years' Experience Built Into This Machine

The experience of over two-fifths of a century in designing and building drilling machines for all kinds of deep drilling has enabled us to incorporate the most practical knowledge of the requirements in the design of

The "New American" Blast Hole Cable Drilling Machine

First of all the machine is built low to give it greatest stability, and the derrick is placed at one side of the center to balance the band wheel on the other.

The derrick is one of the strongest ever constructed and is designed to be raised by the power of the machine.

The important feature of the design of this machine is that it carries drilling tools weighing up to 1200 pounds, and the machine is so simple in design that it is not of excessive weight and therefore readily portable.

It delivers 55 to 60 strokes per minute and will maintain a speed of 60 strokes per minute in a dry hole to a depth of 40 feet.

It will drill 50 to 100 feet of $5\frac{1}{2}$ inch hole in a 10-hour day in average working conditions. Not a *record* day, mind you, but *average conditions*.

The drilling tools are always *hung up* off the bottom when spud beam is stopped and always start on the *down stroke*.

There are no gear wheels or clutches and the spudding motion is stopped instantly regardless of the speed of the engine.

Fitted with gasoline, steam, or electric power.

Bulletin 129 tells about this improved machine. Shall we mail you a copy?

**The American
Well Works**

General Office and Works:
Aurora, Ill.

Chicago Office:
First National Bank Building





IMPROVED DESIGN

The locomotive illustrated was built for the Hardaway Contracting Company, Whitney, N. C., and represents the latest development in this type of locomotive.

It is suitable for contractors, quarries, mines, plantation and industrial service. It will haul 2,325 tons on level, and 195 tons on 3 per cent grades.

Consult us when in the market for new locomotives. Let us help you select the locomotive best suited to your needs.

AMERICAN LOCOMOTIVE COMPANY 30 CHURCH STREET, NEW YORK

McCormick Building, Chicago, Ill.

Carl G. Borchert, Pioneer Building, St. Paul, Minn.

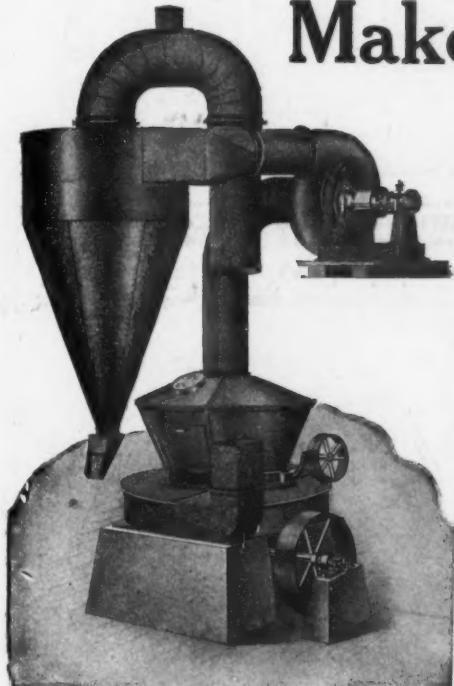
N. B. Livermore & Company, San Francisco and Los Angeles, California

Northwestern Equipment Company, Seattle, Wash., and Portland, Oregon

Dominion Express Bldg., Montreal, Canada

A. Baldwin & Co., New Orleans, La.

100 Mesh Raymondized Gypsum Rock Makes the Finest Plaster



The introduction of the Raymond Gypsum Rock Pulverizer into the manufacture of Gypsum Plaster marked a new era in this industry. The antiquated methods of grinding to only 50 mesh made it impossible to produce a plaster of the highest efficiency, but now that a method has been found to grind the Rock to the finest mesh a higher grade product is the result. The

RAYMOND PULVERIZING AIR-SEPARATING SYSTEM

grinds with the lowest labor and lowest power costs, and while the grinders are in operation the separation is done by air suction which conveys the powder to the bins without the aid of any other handling equipment.

By the Raymond Process the Gypsum Rock is ground to 100 mesh, regardless of whether it is pure gypsum or that it contains selenite or flinty substances, or whether it be ground raw or in a calcined state. It is always uniform. It is separated by air suction. The separation is thorough and complete, done without interruption of the grinders. The grinding is done in less time—increasing your capacity. The powder is conveyed in galvanized pipes by pneumatic action to the bins. All screens are eliminated. conveying and elevating machinery, belting and shafting are done away with and the power, space and expense of their upkeep cut out.

Stack losses from kettles, the power to drive them and the time necessary to calcine a kettle is cut to the minimum. More sand can be mixed with plaster and still produce a better, stronger, smoother wall.

Write for our "Book on Pulverizing"—It embodies the most advanced ideas in Grinding Engineering—being the result of 25 years study; involving an expenditure of hundreds of thousands of dollars in experiments, inventions and improvements in pulverizing processes in all industries.

We design special machinery and methods for Pulverizing, Grinding, Separating and Conveying all powdered products. We manufacture Automatic Pulverizers, Roller Mills, Vacuum Air Separators, Crushers, Special Exhaust Fans and Dust Collectors.

SEND FOR
THE BOOK

Raymond Bros. Impact Pulverizer Co.,
1301 N. Branch St., Chicago.

Please send us your Book on Modern
Methods of Pulverization.

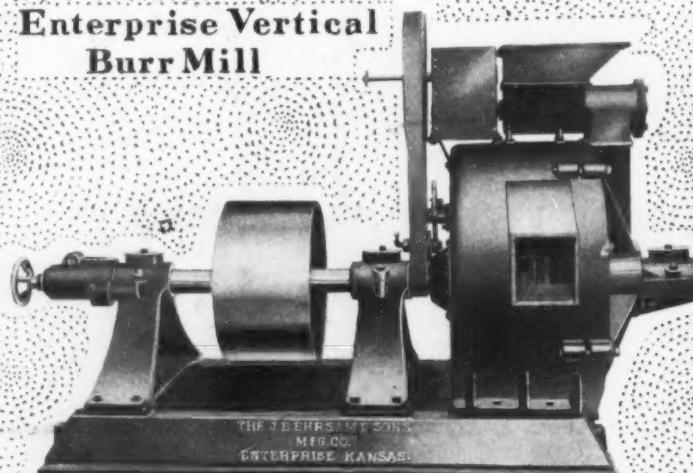
Name.....

Street.....

City..... State.....

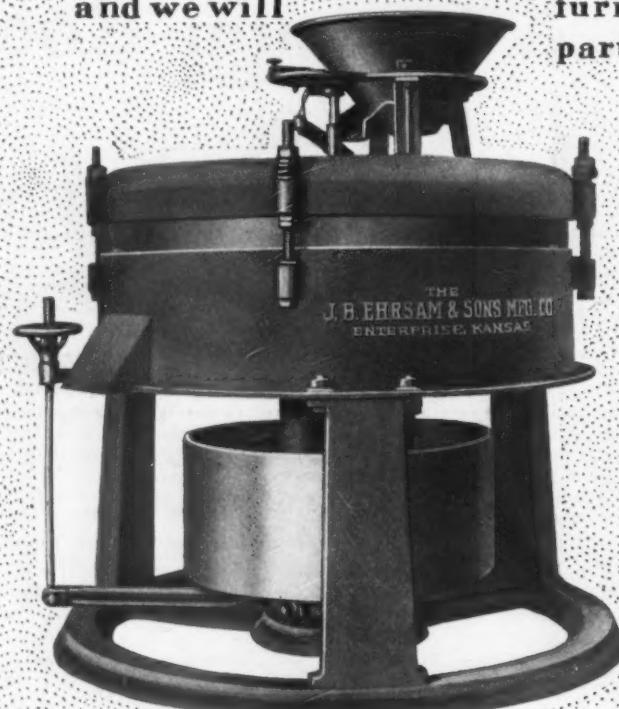
Equip your grinding plant with EHRSAM grinding & separating machinery

Enterprise Vertical
Burr Mill

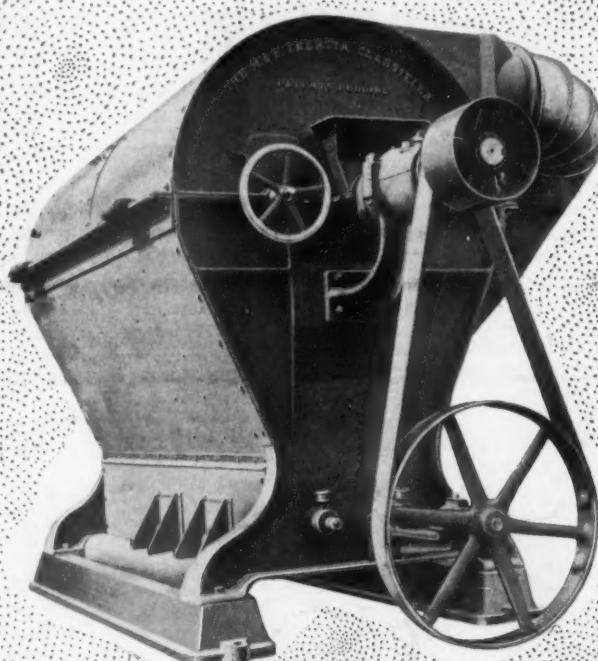


THE MORSHER-EHRSAM
SYSTEM of GRINDING &
SEPARATING will enable
you to produce a finer produ-
ct without corresponding in-
crease in power.

SEND US A SAMPLE of your material
stating fineness and capacity required
and we will
furnish full
particulars.



Horizontal Burr Mill



Inertia Classifier

THE INERTIA CLASSIFIER
is of inestimable value in plants
where a fine material is required
owing to its low cost per ton cap-
acity and owing to the small amo-
unt of power required per ton
capacity.

It can be operated in connec-
tion with Burr Mills Hammer Mills
or any other type of grinding Mill.

J. B. EHRSAM & SONS
Manufactures of
GYPSUM PLASTER
MILL MACHINERY. **MFG.CO.** ENTERPRISE,
KANSAS.

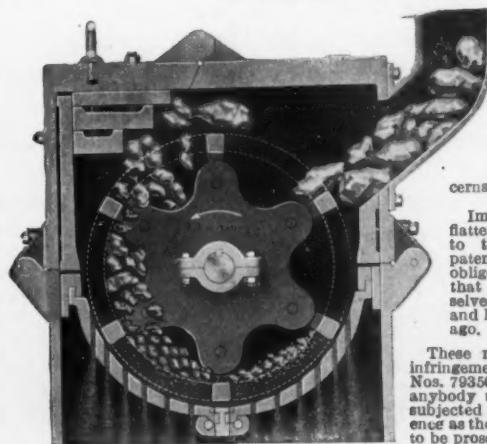
DECEMBER 22, 1913.

ROCK PRODUCTS

7

THE GARDNER CRUSHER

For Grinding and Pulverizing Limestone, Feldspar, Oil Cakes, Bone Tankage, Marl, Phosphate Rock, Bricks, Granite, Coal, Etc.

WARNING

We warn our prospective customers against imitations of our machine which have lately been put on the market by two of the largest concerns in America.

Imitation is a great flattery to us but in order to try to infringe our patents they have been obliged to resort to devices that we have tried ourselves in the beginning and have abandoned long ago.

These machines are direct imitations of our patents Nos. 793506 and 1013527 and anybody using them may be subjected to future inconvenience as the infringers are going to be prosecuted.

GARDNER CRUSHER COMPANY Office: 1482 Broadway

Demonstrating Plant: 556 West 34th Street, New York

AGENTS

MARSH COMPANY, Old Colony Bldg., Chicago, Ill.

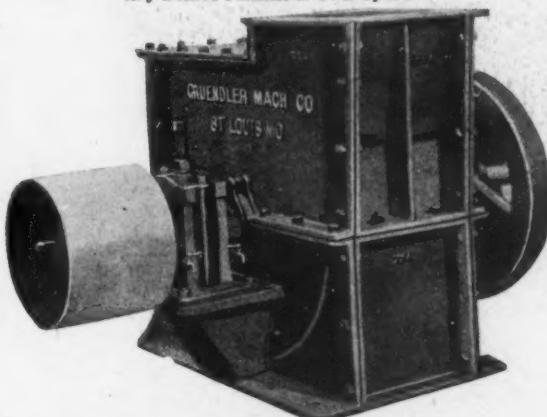
C. O. BARTLETT & SNOW CO., Cleveland, Ohio

L. W. E. AUSTIN MACHINERY COMPANY, 2 Spring Street, Atlanta, Ga.

GRUENDLER PULVERIZERS

Grind perfectly Limestone, Phosphate Rock, Coal, Brickbats, Coke, Kaolin, Shale, Marl, Fireclay, Bones, Tankage, Fertilizer Materials and Ores of all kinds.

Any Desired Fineness in ONE Operation

**One Customer Writes:**

"The Crusher works to our entire satisfaction and we believe we have selected the best make for our purpose."

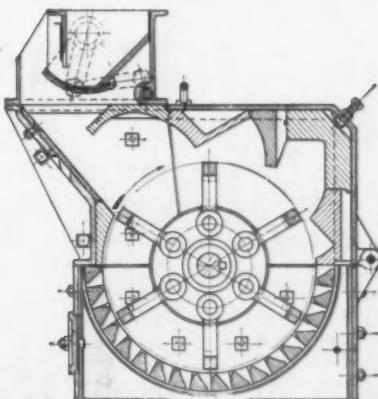
Another One Says:

"The two Crushers you have furnished us have given entire satisfaction. We are now considering putting in another machine of larger capacity; kindly state lowest prices and sizes."

We manufacture these machines in sizes from 3 to 400 tons daily capacity. The entire interior is constructed of steel and they are built for great strength and durability throughout. They are easily handled, all adjustments being made from the outside.

Write for Catalog and Prices

GRUENDLER PATENT CRUSHER & PULVERIZER COMPANY
924-928 N. FIRST STREET SAINT LOUIS, MO.

Pulverizers

Cross Section of Allis-Chalmers Pulverator (Patented)

Pulverizing
by a New Principle

Note that Involute Curve
The Direction of Rotation

Advise us your requirements concerning capacity and fineness wanted

Forward Sample of Your Material

Complete Rock Crushing Plants and Cement Mills—
Power Plants—Electric Motors

Allis-Chalmers
Manufacturing Company

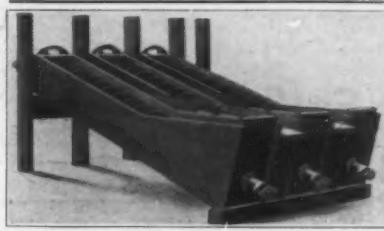
OFFICES IN ALL PRINCIPLE CITIES
MILWAUKEE, WISCONSIN.

For All Canadian Business Refer to Canadian Allis-Chalmers, Ltd., Toronto, Ont.
FOREIGN REPRESENTATIVES:—Frank R. Perrot, 883 Hay St., Perth, W. A.
Frank R. Perrot, 204 Clarence St., Sidney, N. S. W. Mark R. Lamb, 87
Galeria Beeche, Casilla, 2653, Santiago, Chile. H. I. Keen, 732 Salisbury
House, London Wall, E. C. London, England.

TISCO MANGANESE
STEEL CASTINGS

FOR SEVERE SERVICE

TAYLOR-WHARTON IRON & STEEL CO.
HIGH BRIDGE, NEW JERSEY



Sand Washers

LEWISTOWN FOUNDRY &
MACHINE CO. Lewistown, Pa.

Builders of heavy duty crushers and
glass sand machinery.

Glass sand plants equipped complete

Write for prices and catalog

Tell 'em you saw it in ROCK PRODUCTS

Quarry Operators—Increase Your Profits

BY GRINDING YOUR SCREENINGS INTO
LIMESTONE FERTILIZER
 WITH
THE WILLIAMS UNIVERSAL FINE GRINDER

If your Limestone contains a high percentage of Carbonate of Lime, it is ideally suited for use as Fertilizer—all that it needs is to be ground to a suitable size, which the Williams Universal Fine Grinder will accomplish in one operation **AT THE MINIMUM COST FOR POWER AND MAINTENANCE.**



THE NEW WILLIAMS

Here is your opportunity to convert waste material into a profitable commodity, the demand for which has been created. It is now up to you to meet this demand, are YOU equipped to do so? If not, let us supply you with the proper equipment. Bulletin No. 4 explains this proposition further, ask for your copy.

Do not delay taking action any longer, because the sooner you put in the Williams Universal Fine Grinder, the sooner you will be able to meet the demand for this material, which has already been created and is increasing steadily. We have furnished over 100 plants with our equipment. Investigate this proposition NOW!

THE WILLIAMS PATENT CRUSHER & PULVERIZER COMPANY

Works: ST. LOUIS, MO.

General Sales Department, Old Colony Building
 CHICAGO, ILL.

SAN FRANCISCO: 268 Market Street

DOES THE ELIMINATING OF HIGH POWER MACHINERY INTEREST YOU?

If So Investigate

The Bradley 66" Three Roll Mill

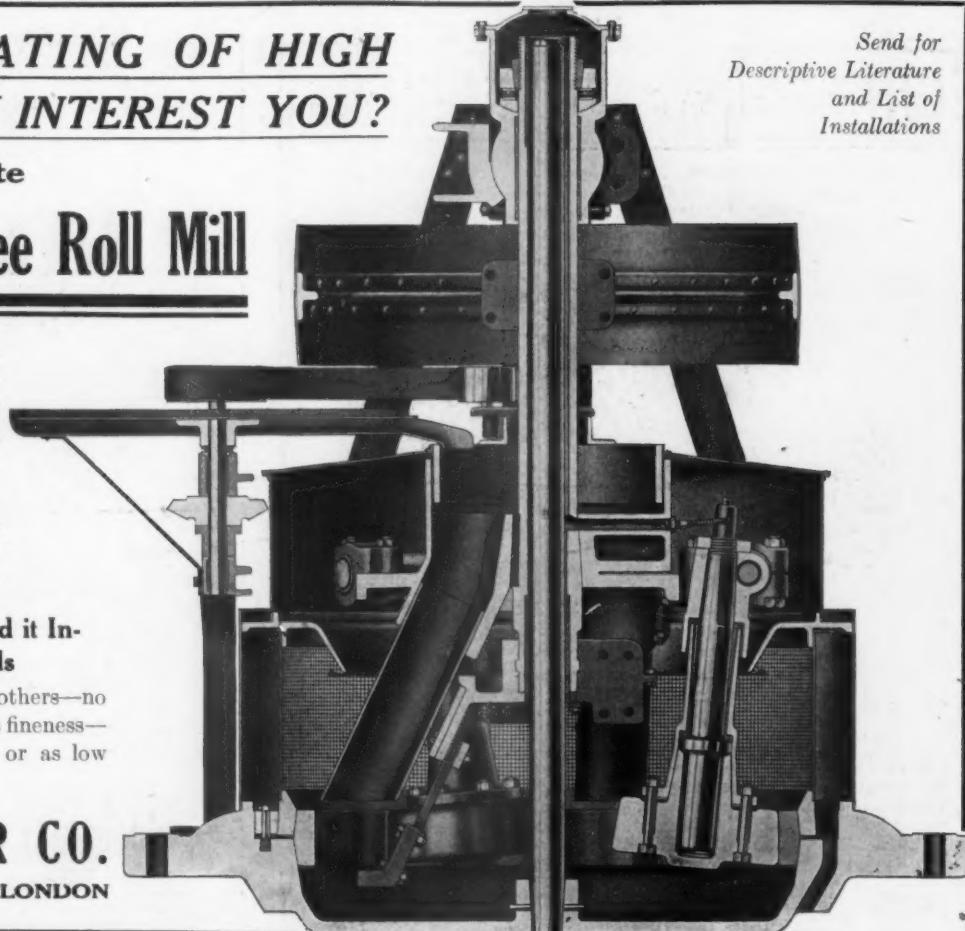
When pulverizing raw materials it takes material **direct from No. 5 Crusher** and reduces it to a fineness, 97% of which will pass a 20 mesh—54% will pass a 100 and 34% will pass a 200 mesh sieve, thus eliminating the breakdown mill before the **Preliminary Grinder**.

On clinker it takes the material **as it comes from the kiln** and reduces it to the same fineness, eliminating rolls or other preliminaries.

On Account of its Fineness of Grind it Increases Efficiency of Tube Mills

This point should be considered above all others—no other preliminary grinder has ever equaled this fineness—no other pulverizer has as large a capacity or as low upkeep cost.

*Send for
 Descriptive Literature
 and List of
 Installations*



BRADLEY PULVERIZER CO.
 BERLIN BOSTON LONDON



AUSTIN GYRATORY CRUSHERS

Made in Eight Sizes

50 to 5000 Tons Per Day

Plans and Specifications submitted and expert advice free on any problems involving rock-crushing or earth-handling.

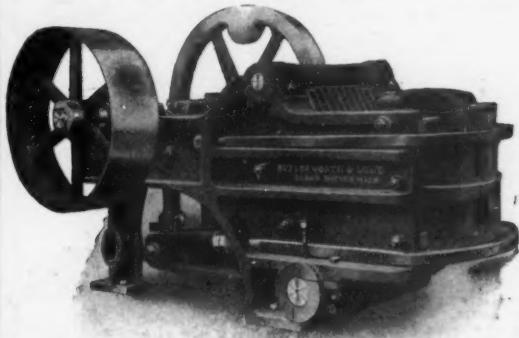
AUSTIN MANUFACTURING CO.

New York Office: 50 CHURCH STREET

CHICAGO

Canadian Agents: MUSSENS, Ltd., Montreal

We manufacture:—Road and Elevating Graders, Scarifiers, Road Rollers, Quarry Cars, Dump Wagons, Stone Spreaders, Street Cleaning Machinery.



Jaw and Rotary CRUSHERS

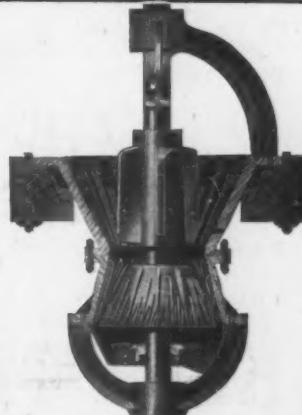
For all Rocks and Ores Softer than Granite

GYPSUM MACHINERY — We design modern Plaster Mills and make all necessary Machinery, including Kettles, Nippers, Crackers, Buhrs, Screens, Elevators, Shafting, etc.

Special Crusher-Grinders for Lime

Butterworth & Lowe
17 Huron Street, Grand Rapids, Mich.

Nippers—17 x 19", 18 x 26", 20 x 30", 24 x 36" and 26 x 42".



Crackers—6 sizes—many variations.



The Grinding is Finished in one Operation

All working parts can be removed and replaced without disturbing belts, feeder, etc.

BONNOT PULVERIZER

Grinds and Screens Limestone, Raw Lime and Hydrated Lime

Does it at One Operation. Gives You Any Desired Fineness

GRINDING LIME IS LARGELY A SCREENING PROPOSITION. THE BONNOT PULVERIZER HAS THE LARGEST SCREENING SURFACE AND CONSEQUENTLY THE GREATEST CAPACITY.

NO OTHER MACHINE LIKE IT IN THE ACCESSIBILITY OF SCREEN AND GRINDING PARTS.

No. 4 Catalog Explains These Advantages

THE BONNOT COMPANY

909 N. Y. Life Bldg.
KANSAS CITY, MO.

CANTON, OHIO



MAXECON

Means MAXimum of ECONomy

Years of experience with the assistance of our hundreds of customers has found THE SOLUTION OF GRINDING HARD MATERIALS. The MAXECON PULVERIZER combines highest EFFICIENCY, greatest DURABILITY and assured RELIABILITY, Uses the LEAST HORSE POWER per capacity. Embodies the features of our Kent Mill with improvements that make it MAXECON.

**WE DO NOT CLAIM ALL of the CREDIT
for this achievement**

We have enjoyed the valuable suggestions of the engineers of the Universal Portland Cement Co. (U. S. Steel Corp.), Sandusky P. C. Co., Chicago Portland C. Co., Marquette Cement Mfg. Co., Western P. C. Co., Cowham Engineering Co., Ironton P. C. Co., Alpena P. C. Co., Castalia P. C. Co., Pennsylvania P. C. Co., and many other patrons.

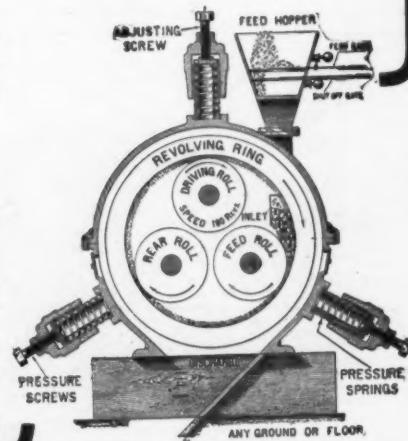
THE RING WOBBLIES

The FREE WOBBLING POUNDING RING instantly and automatically ADAPTS its position to the variations of work.

Its GRINDING ACTION is DIFFERENT than any other; besides the STRAIGHT rolling action of the rolls, the SIDE to SIDE motion of the ring makes the material subject to TWO crushing forces and DOUBLE OUTPUT results.

KENT MILL CO.

10 RAPELYEA ST., BOROUGH OF BROOKLYN, N. Y. CITY
LONDON, W. C., 31 HIGH HOLBORN
CHARLOTTENBURG 5, WINDSCHEID STRASSE 31, BERLIN



HOWELLS DRILLS

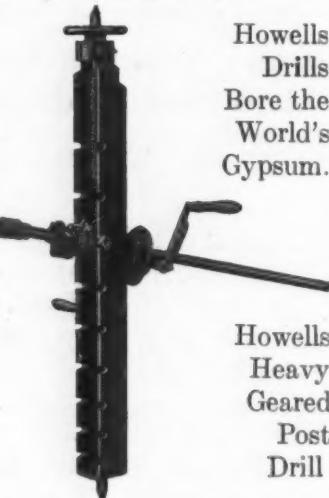
for all purposes where drills are required. Combine efficiency and economy.

Standard
Rock
Drill of
the World.

Fastest
Strongest
most
Durable
Rock Drill.

Howells
Drills
Bore the
World's
Gypsum.

Howells
Heavy
Geared
Post
Drill



Thousands of these drills doing duty everywhere — speak for themselves.

These drills have a record — can't be beat. Will drill from five to seven inches per minute in gypsum or soft rock.

We make over 40 different kinds of Auger Drills, operated by Hand, Electricity and Air.

Howells Mining Drill Company
Plymouth, Pa., U. S. A. ::

*Write for Catalogue
No. 88 today*

IT PAYS DIVIDENDS

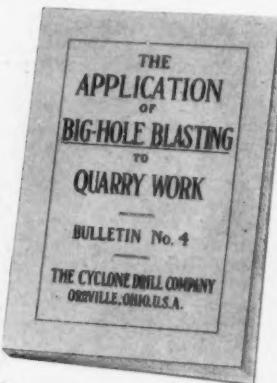
THIS BULLETIN

It explains just how the big-hole method of blasting reduces the cost of stone.

The analysis embraces not only drilling and shooting operations, but it deals with the quarry plant as a whole and shows how the big drill increases output and reduces cost in ALL departments.

THE BULLETIN contains 68 pages, with illustrations showing 32 plants where CYCLONE DRILLS are earning from 100 to 500 per cent on the investment.

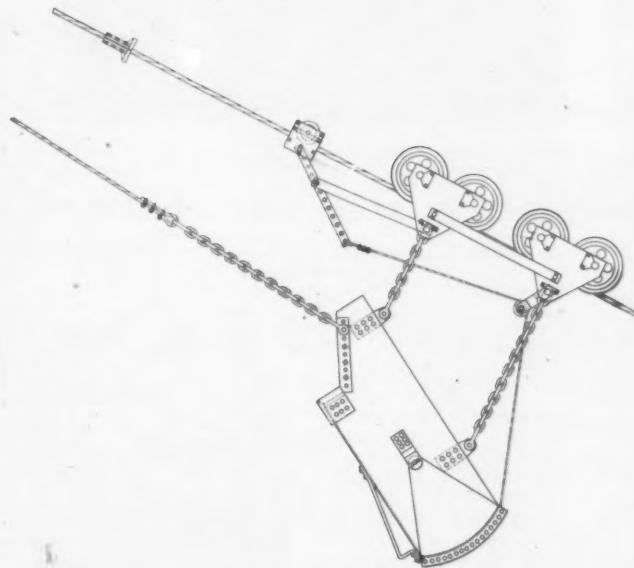
We will be glad to furnish Bulletin No. 4 to all who are interested in high-efficiency plant operation. Send for it.



THE CYCLONE DRILL CO., ORRVILLE, OHIO

BOX 630

— DULL'S — Rear Dump Excavators



We have developed several styles of improved excavators of the gravity return type, making very important advances over others

- 1st. The buckets are arranged to discharge at any point along the main cable.
- 2nd. Extra large four wheel trolley, brass bushed and provided with grease cups.
- 3rd. Automatic rear dumping bucket.

The saving of power and time by our rear dumping bucket is very important. To turn a bucket over requires considerable additional power, being one of the hardest duties of the excavator engine to perform, as the load is heavy and the lift directly vertical. The automatic operation of the gate, both in opening and closing is a very simple one, and adds greatly to the value.

Our buckets are made of extra heavy plates, thoroughly riveted and stiffened by heavy reinforcing bars. The trolley wheels are bronze bushed; the pins are interchangeable and are easily accessible for repairs. The best improved plough steel cables are used. Our cable fittings are manufactured with particular care.

Write to us today for complete information and let us show you some of the wonderful results we have accomplished.

THE RAYMOND W. DULL CO.
718 CHAMBER OF COMMERCE BLDG.
CHICAGO, ILLINOIS



HOISTING rope of every description for elevators, mines, coal hoists, ore hoists, conveyors, derricks and cranes, stump pullers, steam shovels, dredges, skidder rope for logging, ballast unloading. Towing hawsers, mooring lines, tiller rope, and ship's rigging. Power transmission. Suspension bridge cables. Rope for all haulage purposes. Flattened strand rope. Non-spinning rope. Steel clad rope. Locked coil track cable for aerial tramways. Flat rope.

Special rope made to order to suit any purpose.

**American
Steel & Wire Company**

Chicago, New York, Worcester, Cleveland, Pittsburgh, Denver.
Export Representative: U. S. Steel Products Co., New York.
Pacific Coast Representative: U. S. Steel Products Co., San Francisco, Los Angeles, Portland, Seattle.

MITCHELL LIME

has been made for over fifty years. It has always maintained a standard of high quality and uniformity. It is today recognized as the leading high calcium lime.

For chemical or building purposes it will give the best of results.

Two plants with ample capacity and two railroads, guarantee prompt shipments and quick deliveries.

Mitchell Lime Company

Works:
Mitchell, Ind.

1515 Consumers' Building,
CHICAGO, ILL.



Be a Monarch Man

WHERE building laws are stringent and inspectors super-critical Monarch Hydrate has never failed to pass successfully all required tests and saved the builders vast sums of money and an immense amount of time.

Time is an important item—Why waste it? We invite you to join the procession of joyful, satisfied, money-saving users of

Monarch Hydrated Lime

WE SHIP SUDDEN

The
National
Lime &
Stone Co.
CAREY, OHIO



Second National Bank Building, Toledo, O. D. H. Burnham & Co., Architects. Tiger Brand Used for Scratch, Brown and White Coat Plastering.

Who Sold the Lime?

Ask somebody that question when you see a fine building like this. Usually you'll find that the lime business goes to the dealer who sells

Tiger Brand White Rock Finish

Take the Woolworth Building, New York, The Merchants National Bank, Indianapolis, the Hay Residence of Cleveland or the Bedford Home in Connecticut, not to mention hundreds of fine public buildings and similar jobs.

There is a reason for TIGER BRAND on buildings like this. It gives satisfaction and it is low enough in price for any job.

TIGER BRAND cannot spoil on your hands, it does not break the sacks or burn. It is an A-1 proposition for dealer as well as builder.

The Kelley Island Lime & Transport Co.
Cleveland, Ohio



BUILT ESPECIALLY
FOR
**SAND and GRAVEL
PLANTS**

The Ohio and Western Lime Company

WORKS AT
Huntington, Indiana
Marion, O.
Gibsonburg, Ohio
Fostoria, Ohio
Sugar Ridge, Ohio
Tiffin, Ohio
Genoa, O.
Limestone, Ohio
Lime City, Ohio
Portage, Ohio
Luckey, Ohio
Bedford, Ind.

MANUFACTURERS OF AND WHOLESALE DEALERS IN

Ohio and Indiana White Finishing Lime, Ground
Lime, Lump Lime, Fertilizer Lime, Hydrate
Lime, Cement, Plaster, Hair, Etc., Etc.

MAIN OFFICE: Huntington, Ind. Branch Office: Marion, Ohio.

Capacity
8000 Barrels
Per Day



BANNER HYDRATE LIME

ITS GROWTH AND PROGRESS
IN FUTURE ISSUE

NATIONAL MORTAR & SUPPLY CO.
PITTSBURG .. PENNSYLVANIA

**"If It Is Lime
We Make It"**

Dealers, Attention!

We manufacture the **Strongest Lime** in Ohio. The reason! Our Lime Stone is of that quality. We can ship straight or mixed cars of bulk, barrels, Mason Hydrate, Lime Flour White Finishing Hydrate, also Clover Grower for improving the soil. Write or wire for prices.

Scioto Lime and Stone Company
Delaware Ohio



Clyde Hydrator with Hood
"The common sense way"

Don't Buy Hydrated Lime

at random; **specify "Clyde Process" Hydrated Lime.** The material that has the qualities **you** want, either as a consumer or a dealer. The presence of this **quality** has enabled Clyde operators to sell 90% of the Hydrated Lime used in America. Insist on getting "Clyde Process" Hydrated Lime, it will put snap into the appearance of your work, it will ginger up a sick selling organization. If your dealer or producer doesn't carry this material, send us his name, we will tell you where you can get it in your neighborhood. We furnish complete "Clyde Process" Hydrating plants with capacities from 1 ton an hour up. Interesting booklets for the asking.

"The Man that put QUALITY into Hydrated Lime."

H. MISCAMPBELL, Duluth, Minn.

Patentee and Sole Manufacturer of Clyde Hydrators

HYDRATED LIME

The Dealers' Opportunity for Increasing His Profit

Many retailers of masons' supplies are either overlooking or failing to appreciate how their sales might be increased by carrying HYDRATE in stock. It will not only increase their revenue directly but put them in touch with a wider range of customers who, in the course of time, might become purchasers of other supplies. This is particularly applicable in suburban cities or rural districts.

If a dealer were to circularize his community, setting forth the many advantages of HYDRATE in the suburban home where they have from a half an acre to ten acres, or for the farmer with a big farm, he would gradually build up a business in this commodity which would be surprising.

The average resident in a suburban district does not know that lime, scientifically hydrated, can be procured in small quantities and kept indefinitely in a comparatively dry place so that it can be used when the occasion presents itself. If this fact were known, practically every one of these suburbanites and farmers would keep a bag or two on hand constantly.

SOME OF THE USES

A small box of HYDRATE kept in the cellar serves to absorb the damp and purifies the atmosphere, making it much more wholesome especially where foods are kept.

HYDRATE can be used for whitewashing. Quite a number of formulas can be secured and if it is properly mixed, it will not only make the very best whitewash, but it will act as a cold water paint.

One of the advantages of using HYDRATE is that it does not have to be slaked. The process of slaking is accompanied by no little danger, especially to the novice who does not understand the explosive nature of lime when it slakes.

HYDRATE is not air slaked lime and for that reason can be used any place that ordinary slaked lime can be employed. Air-slaked lime cannot be used for plastering, but HYDRATE can. There are always times when a little patching is necessary. Laying up of stone or brick can be easily accomplished, saving both time and money.

HYDRATE, when mixed with concrete fills voids and pores and not only makes the concrete more plastic and easier to use, but by increasing its density, makes it watertight. It also has a tendency to lighten the color and make a more attractive job. Add 10% to 15% to the mix.

HYDRATE is also a well known insecticide

Our business is to install up-to-date hydrating plants and guarantee results. Our plants are all designed to meet local conditions. The CONTINUOUS PROCESS is the only process that has proved successful in hydrating both high calcium and dolomitic limes. While we do not recommend the batch system, however, we install them for making hydrate for the fertilizer trade, but not for general use. We would like to take this matter up personally with you and feel confident that we could interest you in our process and machinery.

and germicide and when used to dust around the chicken houses will not only have a tendency to purify the atmosphere but keep down vermin, especially if mixed with kerosene.

HYDRATE can be used to spray around the lawn or garden or around roots of trees, shrubbery, etc. It can be used with a mixture of kerosene or sulphur as a spray.

There are many more uses for lime around the farm that the average farmer is well acquainted with.

ONE DEALER'S EXPERIENCE

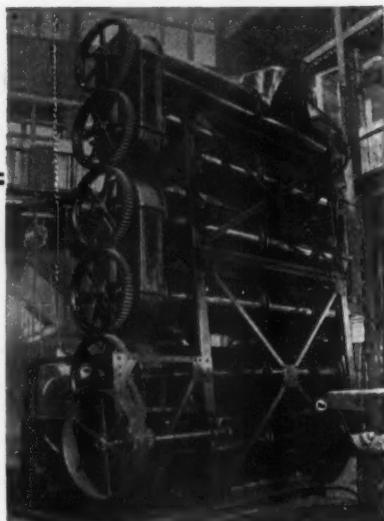
We have in mind a retailer of masons' supplies who has, by circularizing the residential section on the outskirts, and the farmers immediately adjacent, to his township, created a demand for HYDRATE in small quantities and he says that the advertising which he has secured in this manner has brought him trade for cement, sewer pipe, coal, lumber and other materials. He puts it up in one, five and ten pound packages and sells it at a nice profit. He says that many of the farmers are now keeping a bag or so constantly on hand and they tell him that they would not be without it as it is one of the handiest things to have about the farm.

One dealer mentioned the case of a farmer living about eight miles from his yard who stated that frequently when he had a little whitewashing to do it would mean sending his man with a team to the nearest station for two or three bushels of quicklime. Frequently the dealer would be sold out of the product for a few days and this would necessitate the team making another trip, thus increasing the cost.

All that is necessary to work up a nice business in this commodity is a little advertising on the part of the retailer in order to acquaint the farmers with the advantages of hydrated lime. While it is not a new product it is comparatively so to the average suburban resident and small farmer and it is to these that the retailer must make his appeal. Many a farmer has been started to using HYDRATE in this way and has become a large user in time.

Retailers of masons' supplies will do well to give this subject some thought and if they are not thoroughly familiar with its possibilities, we would be pleased to give them any assistance or information which we have at hand to aid them in building up their trade in HYDRATE.

—*Mason & Builder.*



THE KRITZER CONTINUOUS PROCESS

The Kritzer Company
Chicago, Ill.

WELLER-MADE

Greeting

Yuletide and the New Year are at hand, a time when the heart and mind are filled with gratitude—we can not but reflect **ours** to the many friends and patrons of Weller-Made Machinery.

The users of Weller-Made Machinery appreciate its distinct merit—we appreciate this acknowledgment and their patronage.

The name "Weller" on Machinery has become so imbedded in the minds of its users that it invariably associates with it the thought and fact of **service**.

Hoping that our wishes for a prosperous and happy New Year will be as welcome as our products, we are,

Very truly yours,

Weller Manufacturing Co., Chicago

New York Office 50 Church Street

Superior Jaw Crushers

"The largest Crusher in the world operating on trap rock." Installed March, 1910, at the quarries of the Birdboro Stone Co., Birdboro, Pa. Produces 3500 to 4000 tons per day. Built in the following Receiving Opening sizes, 26" x 24"; 42" x 40"; 60" x 48"; 84" x 60".

Write for Bulletin PM 44-58

POWER AND MINING MACHINERY CO.

Works: Cudahy, Wis.

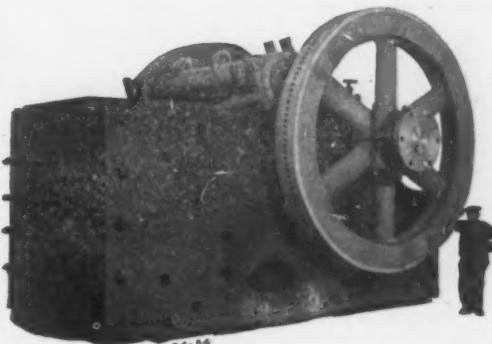
New York Office: 115 Broadway

District Offices: Chicago.

El Paso.

San Francisco.

Atlanta.



M273.2

STURTEVANT MACHINERY

CRUSHERS

Thirty Years of Practical Experience has taught us that no one machine is adapted to all purposes. Customers expect correctly designed machines for their special work. Our large line enables one to select properly. It consists of:

CRUSHERS—For coarse, medium and fine work on hard or soft rock. Jaw, Rotary and Hammer design.

CRUSHING ROLLS—Coarse, medium and fine. Hard or soft rock,—wet or dry.

TRI-ROLL MILLS—For medium crushing, giving Two Roll Reductions.

RING-ROLL MILLS—For pulverizing hard materials.

EMERY MILLS and HAMMER-BAR MILLS—For pulverizing softer materials.

SCREENS—Inclined Vibrating and Rotary for fine or coarse work—wet or dry.

GRINDERS

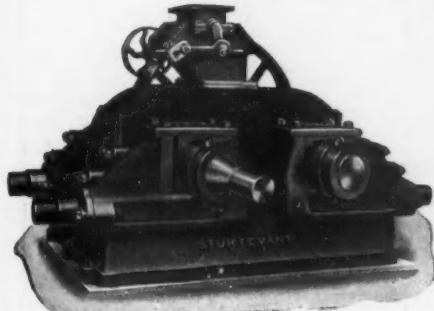
Send for Catalogue.

Sampling Crushers, Rolls, Grinders and Screens.

Send for Catalogue.

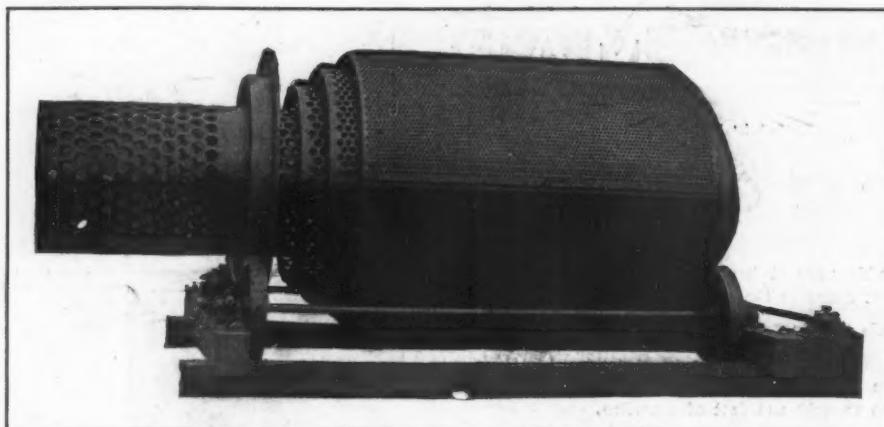
STURTEVANT MILL CO., BOSTON, MASS.

NEW YORK CHICAGO CLEVELAND DENVER PITTSBURGH ATLANTA VICTORIA, B. C. LONDON ENG.



Tell 'em you saw it in ROCK PRODUCTS

JOHN O'LAUGHLIN'S SCREEN



The advantages of these screens are described in detail in a circular which WE WILL MAIL TO ANY ADDRESS. Mr. John O'Laughlin, the inventor, has designed many notable improvements in rock-drilling, quarrying, crushing and screening machinery, and uses these improved screens in his own crushing plants, which others have declared "to be the most perfect in existence in every detail." The O'Laughlin Screen is an important factor in the most modern and perfect stone-crushing plant.

made solely by Johnston & Chapman, is the

ONLY SCREEN

on the market for wide-awake quarry-men and miners, who want to separate crushed granite, limestone or other minerals, gravel, sand, coal or coke. It will soon earn its cost in saving of repairs, and maintenance, and reduced power, and will do more and cleaner work than any other cylindrical screen of like area. No one can afford to keep old-traps in use when the O'Laughlin installed

NOW

will from the moment it starts give a better and larger product, and a big interest on your investment in continuous saving in cost of repairs, renewals, and power. For particulars address:

JOHNSTON & CHAPMAN CO.

Corner Francisco and Carroll Ave., Chicago, Ill.

Perforators of Sheet Metals, Flat, Cylindrical, and Conical Perforated Screen Plates for Quarries, Mines, Reduction Works, Mills and all Industrial Purposes.

OUR MOTTO—"QUALITY and SERVICE"

(Prices Always Right)

WIRE, MAIL OR PHONE ORDERS TO NEAREST MILL

The National Retarder Co.

SUCCESSORS TO

The Chemical Stucco Retarder Co.
Webster City, Iowa

The Ohio Retarder Co.
Port Clinton, Ohio

The Binns Stucco Retarder Co.
Uhrichsville, Ohio

MILLS AT

Webster City, Iowa

Port Clinton, Ohio

Branch Office, Toledo, Ohio



ABOVE ALL OTHERS

As a protection against moisture as well as a decoration for brick and cement is the

Bay State Brick and Cement Coating

It does not destroy the distinctive texture of concrete and becomes a part of the material itself. It is specified and used by the largest architects, contractors and builders everywhere. It is suitable for mill construction, private houses, hotels, bridges or wherever concrete is exposed to moisture. It is endorsed by the National Board of Fire Underwriters as a fire retarder; comes in many shades. Our Booklet J will tell you how necessary our coating is to protect Brick, Cement and Stucco.

Bay State Steel Coating

protects as well as decorates Iron and Steel Structures. A special rust preventative to be used under the finishing color to prevent the slow oxidizing action caused by moisture. Send also for Color Card and Booklet J-1 that tells you all about Bay State Steel Coating. Made and sold by

WADSWORTH, HOWLAND & CO., Inc.

PAINT AND VARNISH MAKERS AND LEAD CORRODERS

82-84 Washington Street, BOSTON, MASS.

New York Office, 101 Park Ave., at 40th Street

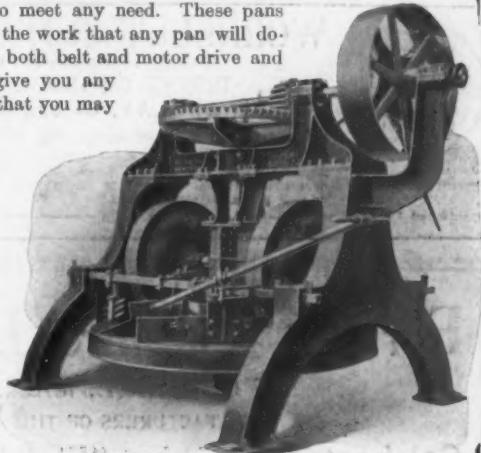
YOUR PAN NEEDS

THIS pan is the identical pan required for your plant and it should speak to you convincingly of our pan quality. It has put many Sand-Lime Brick Plants on a paying basis and will make money for you. There is no line of pans made which will compare with the "Built Right, Run Right" line and your needs can be fully taken care of from our peerless line. We build pans with a range in size and capacity to meet any need. These pans are adapted for all the work that any pan will do. We have them in both belt and motor drive and will be pleased to give you any points on our pans that you may inquire about.

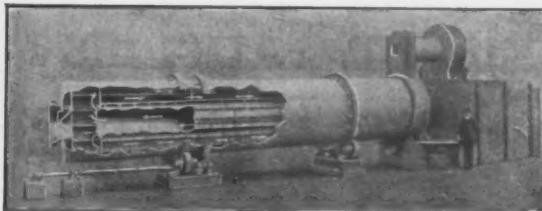
A poor pan is an expensive proposition. Its inefficiency shows in the quality of your product and the size of your repair bills. It also limits your capacity by handicapping the rest of the equipment. Real economy would suggest that your pans be the best possible. We will be pleased to talk pans or any other equipment with you.

We Build Complete Equipments for Sand-Lime and Clay Brick Plants

The American Clay Machinery Co.
Willoughby, Ohio, U. S. A.



Tell 'em you saw it in ROCK PRODUCTS



Section showing direction gases pass through the dryer.

Neither Guesswork Nor Theory

are practiced by us when it comes to solving a problem in drying. We know what we can do for we have been specialists in the drying field for the last 16 years.

RUGGLES-COLES "DOUBLE SHELL" DRYERS

are used in all parts of the world, there being more than 350 installations. Over half a hundred are used for drying sand and gypsum at plaster, brick and cement plants.

We build six regular types of dryers, but for special work we build machines to order.

Book "What We Dry" will interest you.

Ruggles-Coles Engineering Co.
CHICAGO OFFICE
McCormick Building
(37-117)

50 Church Street
NEW YORK



Y. M. C. A. BUILDING, MOLINE, ILLINOIS
Medium Waterproofing Used Exclusively in Concrete Basement, Walls and Floors.

MEDUSA WATERPROOFING

(Patented April 23, 1907)

MAKES CONCRETE IMPERVIOUS TO WATER AND PREVENTS EFFLORESCENCE AND DISCOLORATION. GIVES ABSOLUTELY PERMANENT RESULTS.

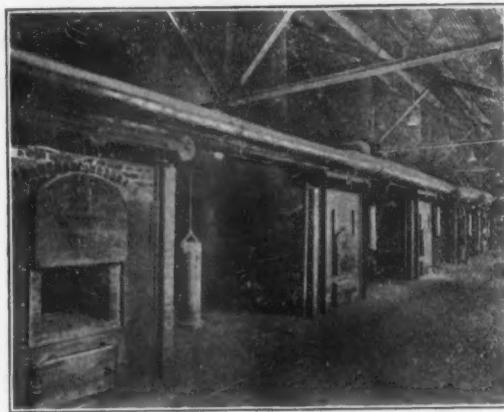
Not a Wash or an Experiment

Write for free illustrated booklets and samples of
MEDUSA GRAY PORTLAND CEMENT
MEDUSA WHITE PORTLAND CEMENT
MEDUSA WATERPROOFING
MEDUSA WATERPROOFED CEMENT
(GRAY AND WHITE)

Sandusky Portland Cement Co.
SANDUSKY, OHIO



Maximum Efficiency in Lime Burning



Firing Floor showing piping for Eldred Process and induced draft
on an installation of six Doherty-Eldred Lime Kilns

WRITE FOR BULLETIN NO. 4

The Improved Equipment Co.

Executive and Sales Office: 60 Wall St., New York
COMBUSTION ENGINEERS

Complete Lime Burning Plants
Lime Kilns

Complete Coal Gas Plants

Gas Producers
Special Industrial Furnaces
Refractory Materials

Tell 'em you saw it in ROCK PRODUCTS

DIRECT HEAT

DRYERS

FOR

BANK SAND
GLASS SAND
ROCK, CLAY
COAL, ETC.

All Mineral, Animal and Vegetable Matter.

We have equipped the largest plants in existence and our dryers are operating in all parts of the world. Write for list of installations and catalogue S. C.

American Process Company
68 William Street, NEW YORK CITY

BACON & FARREL
ORE & ROCK
CRUSHING - WORLD KNOWN
ROLLS-CRUSHERS
EARL C. BACON, ENGINEER
HAYMEYER BUILDING, NEW YORK



WORRELL'S ROTARY DRIERS

(First Efficient Rotary Fire Driers Built)

DIRECT OR INDIRECT HEAT,
FOR SAND, CLAY, CRUSHED ROCK, GRAIN
and other granular or fibrous matter. High Efficiency, Durability and Simplicity.

IMPORTANT: In sending for prices and printed matter state your
approximate % moisture in your product, etc., S. E. WORRELL
or mail pound sample in tin or glass.

Established 1879

209 Center St.

HANNIBAL, MO.

Farnam "Cheshire" Lime Co.

OF CHESHIRE, MASS.

MANUFACTURERS OF THE
Celebrated Cheshire "Finishing" Lime

Well known throughout New York and the Eastern States as the finest
finishing lime manufactured. The special feature of this lime is its quick
and even slacking, thus preventing any cracking or checking when put
on the wall. It is the best lime used in the country today for all

HIGH GRADE FINISHING WORK

Selling Department, 39 Cortlandt St., N.Y., C. J. CURTIN, Pres't.

ROCK PRODUCTS

ESTABLISHED IN LOUISVILLE, KY., 1902.
DEVOTED TO CONCRETE AND MANUFACTURED BUILDING MATERIALS.

Volume XIII.

CHICAGO, DECEMBER 22, 1913.

Number 6

THE FRANCIS PUBLISHING COMPANY

EDGAR H. DEFEBAUGH, Pres.

Seventh Floor, Ellsworth Bldg., 537 So. Dearborn St., Chicago, Ill., U. S. A.
Telephone Harrison 8086, 8087 and 8088.

EDITORS:

EDGAR H. DEFEBAUGH.

FRED K. IRVINE.

Communications on subjects of interest to any branch of the industry are solicited and will be paid for if available.

Every reader is invited to make the office of Rock Products his headquarters while in Chicago. Editorial and advertising copy should reach this office at least five days preceding publication date.

TERMS OF ANNUAL SUBSCRIPTION.

In the United States and Possessions and Mexico.....	\$1.00
In the Dominion of Canada and all Countries in the Postal Union.....	1.50
Subscriptions are payable in advance, and in default of written orders to the contrary, are continued at our option.	
Advertising rates furnished on application.	

Published on the 22nd of each month.
Entered as second-class matter July 2, 1907, at the Postoffice at Chicago, Illinois, under
Act of March 3, 1879.
Copyright, 1913, by E. H. Defebaugh.

The high quality of American Portland cement is steadily gaining popularity in the foreign markets.

Co-operation is a trade principle which, faithfully applied, increases tonnage and profits with equal stride.

As the holiday season comes on ROCK PRODUCTS extends the cordial greeting of Merry Christmas to all, and to all a happy and prosperous year in 1914.

The sales of hydrated lime have increased very considerably during the past season, possibly by as much as a 40 per cent gain over the big figures of last year.

The fireproof dwelling house is what every suburbanite wants and needs, and he will pay for it, too. It can only be had by the use of concrete. This field is well worth exploitation from the commercial standpoint, for it applies to the isolated farm house as well as the village and city home.

Concrete work and general masonry operations have held on without interruption right up to the holidays throughout New England and all the northern half of the east Mississippi region. The long, active season has helped out the net results wonderfully, both in mine, quarry, mill and local delivery branches of the building material industries.

In making up your New Year resolutions, Mr. Material Dealer, just make one to go and get acquainted with your competitor over on the other side of the track. Yes. He has got a bunch of the same kind of troubles you know about. If you talk it over you may find out how to stop a leak somewhere so that you can both make money where you now are losing. A little reciprocity helps all the time, and more of it in proportion.

We owe the public interest in highway improvements first to the bicycle, and second to the automobile. The people of the country first began to be acquainted with the roads and their condition for long stretches when these innovations brought them into greater use. The need for better roads, even a better and more permanent road than the best possible macadam road, was clearly seen. Just how to get the road money to reach the road is the present biggest problem. In every state it is mixed up with petty politics, and the physical efficiency is consequently miserably low.

The new currency laws will speedily bring about a new system of banking which will have the effect of multiplying the number of small building investments, because it provides for a wide vista of credits and consequent values which have heretofore never been available. Greater building operations will not be materially affected because big commercial organizations know how to provide for all their requirements. Instead of any elements of dread in the horizon of building materials, by reason of changes in the financial status of investors, we see it quite the other way. Possibly there will be a shrinkage in the demand from the big cities, which are for the most part overbuilt, and speculative operations will undoubtedly fall off, but this will be more than offset by investment building for the reason that more mobile investments will not for some time be so attractive as they have been.

The enterprising dealer in building supplies in closing up the activities of the year finds by an inspection of his books that by far the greater part of his profits have come from the specialties, which have become known as an indispensable part of his operations in the past few years, while the staples of cement, lime and plaster have run up into tremendous tonnage with little or no profit. It looks something like this 80 per cent of all the effort and responsibility, with fully that proportion of accounts to handle, good, bad and half bad, has been done for nothing, while 20 per cent of the trade with smaller tonnage and less effort has supported his establishment, and besides the customers in the specialty lines show up as the best pay on the books. The push of salesmanship that he has put behind waterproofing, coatings, plaster board, corner brad and metal lath has been well worth while, and it will pay to work harder upon the profitable end of the business next year. There is no end to the expansion of business for those commodities in which there is sufficient margin to be an incentive to the dealer to work systematical in his own community.

The management of the big railroad systems and fast freight lines are figuring upon the general introduction of freight cars constructed entirely of steel. It is found that, present dimensions of cars being considered, there is a pronounced addition to the dead load of the car, and this piles up at the cost end of motive power, and even reaches to the factor of safety in bridge construction and the general maintenance of the road bed. To build the cars larger, running the capacity up to 75 tons, or even 100 tons, solves some of the first cost and increase weight factors, but makes a very bad showing as against present road bed and bridge equipment. The 5 per cent advance in rates all along the line will not begin to take care of the increased expenses that will be entailed by such a radical change as the steel freight car will introduce. Forty and 50-ton freight cars now in use have been a tremendous burden upon the shippers of the country in all cases where "marked capacity of car" rulings have governed the minimum commodity car load rate, and to the same extent has it acted as a substantial rate-raising proposition for the roads. Larger marked capacity upon the cars would simply mean, in many cases, a larger number of unhailed tons to be paid for by the shipper. There is no use in a wholesale persecution of the common carriers, for the public will have to pay the piper in the end. At the same time the roads have got to get good and play fair with the public if they know what is good for them. Since there is no longer such a thing as competition in modern railroading, efficiency has dwindled and is scarcely considered as a profitable study. It will always be so while the rates can be raised *ad libitum*.

EDITORIAL CHAT

COMING ASSOCIATION MEETINGS.

American Concrete Institute, Auditorium Hotel, Chicago, Ill., February 16-20, 1914.
 Eighth Mid-West Cement Show, Auditorium, Omaha, Neb., January 30 to February 4, 1914.
 Illinois Lumber and Builders' Supply Dealers' Association, Chicago, Ill. Date announced later.
 Interstate Cement Tile Manufacturers' Association, Chicago, Ill., February 17-19, 1914.
 Mason Material Dealers' Association of New Jersey, Annual meeting Thursday, March 12, 1914.
 National Paving Brick Manufacturers' Association, New Orleans, La., March 2-7, 1914; headquarters, Hotel Grunewald; twenty-eighth annual convention.
 National Lime Manufacturers' Assn., New York, N. Y., Hotel Astor, February 4 and 5.
 National Builders' Supply Association, Hotel La Salle, Chicago, February 17-18, 1914.
 National Association of Sand and Gravel Producers, Chicago, Ill. Date announced later.
 National Conference on Concrete Road Building, Chicago, Ill., February 12, 13 and 14, 1914.
 Nebraska Cement Users' Association, Omaha, Neb., January 30 to February 4, 1914; ninth annual convention.
 New England Builders' Supply Association. Date announced later.
 Ohio Builders' Supply Association, Southern Hotel, Columbus, Ohio, January 21-22-23.
 Seventh Chicago Cement Show, Coliseum, Chicago, Ill., February 12-21, 1914.

C. M. Timmons, manager of the Louisville, Ky., office of the Kosmos Portland Cement Company, whose plant is located in Kosmosdale, Ky., was a recent Chicago visitor.

C. L. Townsend, Jr., formerly connected with the Federal Terra Cotta Company, of New York, is now connected with the sales force of S. B. Dobbs, 303 Bailey Building, representatives of the Atlantic Brick Company, and the Federal Terra Cotta Company, of Haddonfield, N. J.

John C. McAvoy, of the McAvoy Vitrified Brick Company, was as busy a man as could have been found during the time that the convention of the American Road Builders' Association was going on, as he had charge of Philadelphia's reception to the delegates to the convention. McAvoy hospitality is a by-word, and he spared no effort to make the visiting good-roadsmen feel at home in this city.

James P. Donovan, of Georgetown, Ky., has secured a patent on a safety railroad tie, made of reinforced concrete, which he claims will prevent rails turning over. The device consists of two reinforced concrete blocks designed to hold the rail firmly in place. It is claimed by the inventor that the tie will outlast ten wooden ties, while costing only about three times as much as a wooden tie.

The local resources of Philadelphia are unlimited, but the flower marts were taxed to the limit when F. B. Dunn, of the Dunn Wire-Cut-Lug Brick Company, of Conneaut, O., made his appearance in the city during the convention of the American Road Builders' Association, as he made a visit to all the flower markets and purchased up all the carnations—white, red and pink—in sight, so that each visitor and delegate might be supplied with a fresh bloom each day. The honor of pinning the posies on the coats of a majority of the receivers and passing out a great many more was given to Miss B. E. Kinner, stenographer-in-chief of the Dunn Wire-Cut-Lug offices in Ohio.

Richard K. Meade, consulting chemical, mechanical and industrial engineer, 202 N. Calvert street, Baltimore, Md., has been retained by the Louisville Portland Cement Co. to prepare plans for their new hydrated lime plant, at Mill Town, Ind. This plant will have a capacity of 60 tons of hydrate per day and will be equipped throughout with the most approved appliances for the manufacture of hydrated lime. The Louisville Portland Cement Co. are among the oldest manufacturers of hydrated lime in the country and their product is widely and favorably known throughout the middle West. The plant will be located along side of their new gas fired lime kilns on the opposite side of the river from their present hydrated lime plant.

E. S. (Teddy) Walton, president of the National Builders' Supply Association, who has been quite ill for several weeks, recently returned to his home in Youngstown, Ohio, greatly improved by his sojourn in a New York health resort. Mr. Walton is now sitting up a few hours each day and his physician believes that within a short time he will be able to receive company, and eventually return to his responsible position as secretary of the Youngstown Ice Company, who are extensive dealers in builders' supplies.

A technical committee for the purpose of studying the various questions of the highest interest in the art of reinforced concrete construction has been established by the German Association of Portland Cement Manufacturers, and a fund of \$240,000 provided for this purpose. Among the questions studied at Dresden are the tests of T-beams under dead loads; researches on the influence of vibrations on resistance of concrete coming either from the pounding on the concrete or the passage of heavy

service. The United States branch of the Canada Pebble Co., Ltd., was established little more than a year ago, but through Mr. Thomson's untiring efforts Canada pebbles have found an ever-increasing use, and for this Mr. Thomson is duly appreciative.

L. M. Gilchrist has been made manager of the Greenleaf Stone Company, which operates quarries at Greenleaf, south of Green Bay, Wis.

J. P. Beck, general manager of the Cement Products Exhibition Co., considers the coming Chicago Cement Show as the greatest and best effort by far that has ever been attempted.

W. P. Hurst, of the Cleveland Material Company, has favored the editor with a very handsome seal leather vest pocket memo note book as a holiday souvenir. It's a splendid reminder of the concern and a man who one can never forget.

T. A. Courtney, sales manager of Speed's Portland Cement, Louisville, Ky., says the central south has shown very gratifying activity in building and permanent improvements for several years past. The sale of cement is the best barometer of such conditions and no one is in closer touch than he.

George J. Siedler has resigned as sales manager of the Taylor-Wharton Iron & Steel Company, of High Bridge, N. J., to become vice-president of the Eynon-Evans Manufacturing Company, of Philadelphia, on January 1, 1914. W. S. Stothoff succeeds Mr. Siedler as sales manager of the Taylor-Wharton Iron & Steel Company.

Harry B. Warner says there are just three essentials to making sales: Find out what the thing you have got to sell is good for. Find out who needs it, and then put it to them so they can't get away from you without an order. Then see that it makes good, and they will come after you, and ring up your telephone at night.

W. H. Ford of the Canadian Cement Co., limited, is on his annual winter tour of the Canadian markets. Over at Cape Breton, the easternmost point of the continent, he ran into real arctic conditions just about the time all the balance of the cement men were enjoying springtime weather at the New York meeting. He was headed for Charleston and the South Carolina hunting clubs for a Christmas holiday, for be it known that cement wonder salesmanager is also some deer hunter. At least that is the way his record reads in one of the most exclusive clubs in his native section. By mid-winter he will take the western swing of his vast territory where the Pacific washes the shores of Victoria, B. C. That is going some.

S. E. Worrell, Hannibal, Mo., who enjoys a worldwide reputation as the manufacturer of rotary driers for sand, lime, clay, etc., recently placed a machine with the Peoria (Ill.) Builders' Supply Co. This was a rotary sand drier with motive connections. A machine is being operated under a guarantee, and although it is smaller in size it is guaranteed to dry nearly double the amount of sand on a smaller consumption of fuel. They have lately made arrangements with the American Trading Co., of New York, whereby the latter concern handles their complete rotary drying equipment in Japan and the Philippine Islands. They are also making experiments, designs and estimates on the cost of drying copra, an important commercial product of the South Sea Islands.

Every year just at this time we receive a message of good cheer from Smith, Emery & Co., San Francisco, Cal., engineers and chemists, which in itself is a little literary gem and an unfailing source of encouragement. We are not to be disappointed this year, for the following letter has just found its way to our bivouac:

As the terrestrial shadow falls across the Dial of Time, it once more lingers at Good Cheer, Hope and Retrospection.

Time has rounded out our business cycle, but it is not complete without acknowledgment of the many acts of courtesy and loyalty accorded by our business associates.

To you, Good Friends, it is our wish that the Christmas Carols will ring clear and sweet, and that Hope, that mighty Trumpeter of 1914, will remain steadfast at your side.

Yours very truly,
 Smith, Emery & Co.



GEORGE M. THOMSON, U. S. REPRESENTATIVE
CANADA PEBBLE CO., LTD., CHICAGO, ILL.

DECEMBER 22, 1913.

United steel sash is the subject of a new 112-page catalog just issued by the Trussed Concrete Steel Co., of Detroit, Mich.

Bulletin 63A of the Jeffrey Manufacturing Company, Columbus, O., gives the latest price lists of Jeffrey detachable link chain attachments and wheels.

Arthur H. Blanchard, M. Am. Soc. C. E., professor in charge of the graduate course in highway engineering at Columbia University, New York City, on December 6 delivered an illustrated lecture on "Modern Developments in Highway Engineering" before the Drexel Institute of Philadelphia.

W. J. Lewis, geological engineer, successor to W. J. Lewis & Company, 1312 First National Bank Building, Chicago, Ill., is now located at Chandler, Arizona, on account of having accepted several large commissions, and will conduct business hereafter from his office at the Hotel San Marcos, Chandler, Arizona.

As a result of the contest among ten of the leading cities of the United States for the 1914 convention of the American Road Congress, under which title the American Highway Association and the American Automobile Association hold their annual conventions, Atlanta, Georgia, has been selected as the next convention city. The convention will be held October 19 to 26.

The State Engineering College, at Ames, Iowa, is planning a winter short term in concrete construction to cover ten days during the winter vacation, beginning December 29th and closing January 10th. Several different courses with reference to different lines of the industry will be given at this time, particular attention being paid to instruction in the use of cement.

The Cleveland Builders' Exchange, of Cleveland, Ohio, has organized classes in concrete construction, the same being formed under the authority of the board of directors, to study every branch of this kind of building work. The members of the class consist of young men, most of whom are employed by contracting firms in the Exchange, and a course of instruction has been provided.

Geo. S. Bartlett has become assistant to the president of the Edison Portland Cement Company, with headquarters in New York City. George is a born New Yorker, but is just as much at home Down East as he is out West. He is a stem-winder and knows the details of the use of cement in little things as well as in the largest dimension of tonnage. Wherever he is there is activity, and George promises to stir them up in the East.

The thirty-sixth annual convention of the Illinois Clayworkers' Association will be held at Champaign, Ill., the latter part of January. The exact dates have not yet been decided, but in all probability the convention will precede the two weeks' program of the Clayworkers' Institute held in the Ceramic Department of the University of Illinois. Detailed information can be secured by writing A. E. Huckins, Secretary, Champaign, Ill.

J. C. Lynch, formerly connected with the Demeey-Degener Co., of Pittsburg, Pa., was recently appointed to the engineering staff of Schaeffer Engineering & Equipment Co., Tiffin, Ohio. J. C. Schaeffer, president of the Schaeffer Company, recently said that their business was making rapid progress and that another engineer would be added to the staff in the near future. ROCK PRODUCTS hopes to see the Schaeffer Engineering & Equipment Company continue its present successful advancement.

The Bradley Pulverizer Co., 92 State street, Boston, Mass., has announced that, as is their usual custom, they have contracted for the entire edition of the American Cement Directory. The book will be distributed free of charge to every superintendent, purchasing agent and manager in the cement industry, and any other persons who desire a copy. The Bradley company has gone to considerable expense in making this directory of benefit to the cement manufacturer and believes that it will be the most complete and correct one of its kind ever issued. Furthermore, they state that they will be glad to hear from any one interested in the book, as it is their desire to place a copy in the hands of every person connected with the purchase of cement mill machinery and supplies.

ROCK PRODUCTS



THE DOUBTER.

I.

You don't believe in Santa Claus?
Listen a moment, pray,
And don't condemn without just cause
The patron of Christmas Day.

II.

There's a family in your neighborhood
Where a ton of coal would be
A gift as welcome as ever could
Grace an empty Christmas tree.

III.

Send a Christmas dinner, with turkey, too,
And plenty of toys—then pause,
And consider the happy fact that you
Yourself are Santa Claus.

THE SPIRIT OF CHRISTMAS CHEER.

In the heart of man, since time began,
Through the moving years I've stood,
And my magic wand has forged the band
Of unselfish brotherhood.
Wher'er men meet, in field or street,
Whether monarch, or prince or clod,
The thought of me insensibly
Brings them nearer unto God.

But strange, indeed, that the growing greed
Of the race for power and gain
Makes men forget, without regret,
The call of want and pain.
And that is why I linger by,
For I know that their hearts ring true,
And they realize, when they meet my eyes,
The things they ought to do.

For I am the mentor of helpful living,
I am the spirit of Christmas giving.

AMERICAN ROAD BUILDERS' TENTH ANNUAL

Eight Sessions in Philadelphia on December 9-10-11-12 Have Proven Usefulness of the Organization.

It has been generally conceded by those who attended the tenth annual convention and exhibition of the American Road Builders' Association, in Philadelphia, on December 9-10-11-12, that it was the most successful from every viewpoint in the history of the organization. The most prominent men in road building in the United States were numbered among the delegate registration, which totaled over two thousand. From Maine to California, and from Canada to Texas, came state highway engineers, state road officials, city and county road engineers, a number of the leading consulting road engineers and a great many road contractors. With these delegates mingled representatives of some of the most important manufacturing institutions whose interests are directly in harmony with all good roads movements.

The American Road Builders' Association differs from many other good roads organizations in that it is, as its name implies, devoted mainly to technical and practical matters having to do with the design, construction and maintenance of public highways. Primarily the aim and object of the association was to bring into closer relationship those engaged or interested in the extension of highway work, to collect and disseminate information relative to such work, to stimulate interest in the subject of highway improvements and to promote such measures as to make for the extension of highway work.

This tenth annual convention was one of the principal activities of the association during the present year. Representatives of all classes of interest identified with road work, directly or indirectly, came together at this annual meeting for the study and discussion of problems with which they have to deal, and at a time of the year when it was convenient for the greater number of members to attend. The convention proved beyond question or doubt the broad scope of the work of the association through its national membership.

In a general review of this meeting of the association the program proved to be not only an example, but furthermore, a comprehensive demonstration of the extensive usefulness of the association through systematic and thorough discussion of road subjects.

Organization, construction and maintenance were the three sections into which the program was divided. Under each subject a number of papers were read by authorities who were especially selected because of their peculiar knowledge and fitness to handle the question. Immediately following the reading of a paper various phases of it were discussed by other delegates who, from actual experience, were chosen for that purpose, while after such formal discussion, any delegate was privileged to ask any question and give the convention the benefit of his own experience. This well-planned method of handling the papers enabled delegates to obtain the widest benefit from the actual experience and opinions of leaders in road design and construction from all parts of the country. Each subject was in consequence so handled as to be of real practical value and assistance. The ample character and broad scope of the matters handled at this meeting are well shown by the subjects of the papers read under the different sections.

On organization the papers included:

"Highway Officials, Their Duties and Powers."

"Division of Expense, Responsibility and Authority Between Nation, State, County and Town."

"The Relation to Each Other of the Contractor, Engineer and Inspector."

"Details of Arrangements for the Use of Convict Labor."

On construction:

"Determination of the Amount of Realignment, Grading and Drainage to Be Done in Connection with Road Improvement."

"Factors Covering a Proper Selection of Road or Street Pavement."

"Short Papers on the Details of the Construction of Various Kinds of Roads and Pavements."

"Unit Price and Lump Sum Contracts and Percentage Work."

"The Testing of Materials for Road and Street Construction."

On maintenance:

"Sub-Organization for Securing Efficient Maintenance."

"General Methods of Repairs and Renewals."

"Bituminous Surface Treatment and Dust Prevention."

A largely attended meeting was held in the ball room of the Bellevue-Stratford Hotel on Thursday evening, and the attendance included the foremost citizens of Philadelphia. This meeting, which was addressed by Mayor Rudolph Blankenburg, of Philadelphia; Congressman D. W. Shackleford, of Missouri; President Samuel Hill, of the association, and others, dealt broadly with the needs and advantages of modern roads and how they can be secured. President Hill's address was especially interesting inasmuch as it was illustrated with splendid views of fine highways and scenes not only in this country, but in Canada and Europe.

W. W. Crosby, a well known consulting engineer of Baltimore and treasurer of the association, in summing up briefly the accomplishments of the meeting, said:

"This convention was, in my judgment, the most successful of its kind from every point of view ever held in this country. It was one of the largest in size, and if not actually the largest in registration, there is no question but what the attendance of actual road workers and road experts was greater at this Philadelphia meeting than at any other convention yet held, excepting, possibly, the triennial congresses of the International Association of Road Congresses. The character and size of the attendance were especially favorable, not only for the consideration of the program at the various meetings during the congress, but also to the exhibitors. These latter were out in greater number than ever before, and their exhibition of their machinery and wares was a remarkable one. Consequently they expected, or at least hoped for, that kind of an attendance which would appreciate and be interested in their exhibits. Several of the exhibitors told me personally that they were in no way disappointed, but, on the contrary, were greatly pleased by the amount of business they were actually able to do during the congress with the practical road workers who visited their booths.

"The program for the meetings of the congress was, as is consistent with the aims and practices of the American Road Builders' Association, confined to the practical side of the question of road improvement. This association has not, and does not, devote its energies to road propaganda. It is the practical side of such questions as how to expend the funds under proper organization, how to carry out the construction, and how to best secure and perform the maintenance, which is of interest to members of these congresses. The program was therefore laid out along these lines and adhered to logically and intelligently. Discussion from the floor and the asking of questions for replies thereto by acknowledged experts was encouraged to the limits permitted by the time available. Consequently the interest in the meetings was keen and the attendance at them taxed the room available, even to the last. Very little 'hot air' or 'skyrocket' oratory, arguing for better roads, was indulged in, and I think everyone who attended the convention came away feeling that they had learned a great deal of practical value through the meetings and the exhibition."

Exhibition of Machinery and Materials.

A special feature of the convention was the complete and comprehensive exhibition of road machinery and road materials. The exhibits not only filled the big hall used for this purpose, but an overflow exhibit was placed in a large tent erected for the purpose on a vacant lot near the hall. All of the exhibitors were well pleased with the interest manifested by the delegates who crowded the exhibit hall from early morning until late in the evening. It was noted that the exhibits were carefully inspected and that the delegates asked many questions regarding them, and went away carrying all available printed information on the subjects in which they were interested. Nearly all of the leading manufacturers of road machinery, materials and equipment used in road building work were represented by attractive booths, and had a number of special representatives on hand to meet the delegates and answer questions. A great deal of attention was attracted to the working models exhibited by the different road machinery manufacturers. These working models included rock crushers, road graders and elevators, scarifiers, road

rollers, road drags, car unloaders and complete plants for road building, etc. The exhibits also included many interesting photographs of equipment in the actual construction of roads in various parts of the country. Many of the exhibitors had their machinery on display fully equipped so that explanation to the inquirer was an easy matter. Many of these machines were provided with electric motors for demonstration purposes. There were also complete lines of other devices and plans that had been developed for all classes of road and street construction, among these being included steam and gasoline tractors, steam shovels, car and wagon loaders, rock drills, heaters, sprinklers and other implements for preparing and applying binders and dust layers, road plows, street sweepers and sprinklers, and almost every device or implement that has proven practical for road work. Among the exhibitors of machinery and appliances were the following:

Acme Road Machinery Co., Frankfort, N. Y.

Bucyrus Company, South Milwaukee, Wis.

Buffalo Pitts Company, Buffalo, N. Y.

J. I. Case Threshing Machine Co., Racine, Wis.

A. B. Farquhar Company, Ltd., York, Pa.

Frick Company, Waynesboro, Pa.

The Good Roads Machinery Co., Inc., Kennett Square, Pa.

Galion Iron Works Co., Galion, O.

The Huber Manufacturing Co., Marion, O.

Chas. Hvass & Co., New York, N. Y.

Ingersoll-Rand Company, New York, N. Y.

Iroquois Works, Barber Asphalt Paving Co., Buffalo, N. Y.

Link-Belt Company, Nicetown, Philadelphia, Pa.

Marion Steam Shovel Co., Marion, O.

Oliver Chilled Plow Works, South Bend, Ind.

Tarrant Manufacturing Co., Saratoga Springs, N. Y.

The Thew Automatic Shovel Co., Lorain, O.

Union Iron Works, Hoboken, N. J.

Universal Road Machinery Co., Kingston, N. Y.

Wheeling Mold & Foundry Co., Wheeling W. Va.

Wiard Plow Co., Batavia, N. Y.

Quite a number of mixers were displayed in operation for mixing concrete and other paving materials, these mixers being especially designed for road construction work. Those showing this machinery included:

Kent Machine Co., Kent, O.

The Knickerbocker Co., Jackson, Mich.

Kohring Machine Co., Milwaukee, Wis.

Lansing Company, Philadelphia, Pa.

Municipal Engineering & Contracting Co., Chicago, Ill.

H. W. Pickett Company, Inc., Philadelphia, Pa.

The Rapid Mixer Co., Grand Rapids, Mich.

Waterloo Cement Machinery Corporation, Waterloo, Iowa.

Nearly all of the prominent manufacturers of road materials or special systems of road construction in the country were represented, some of them showing sections of roadways built with their materials or according to their system, and others using photographs and transparencies to illustrate the use of their products in various parts of the country. Among this class exhibiting were:

Ames Road Co., Easton, Pa.

The Barber Asphalt Paving Co., Philadelphia, Pa.

Barrett Manufacturing Co., New York City, N. Y.

Bituminized Road Co., Kansas City, Mo.

The Philip Carey Company, Lockland, Cincinnati, Ohio.

Dolarway Paving Co., New York, N. Y.

The Dunn Wire-Cut-Lug Brick Co., Conneaut, O.

The Dustoline for Roads Co., Summit, N. J.

Hassam Paving Co., Worcester, Mass.

Headley Good Roads Co., Philadelphia, Pa.

The Jennison-Wright Co., Toledo, O.

The McAvoy Vitrified Brick Co., Philadelphia, Pa.

Robeson Process Co., Pennington, N. J.

Rocmac Limited, Inc., Philadelphia, Pa.

Standard Oil Co. of New York, New York, N. Y.

The Texas Company, New York, N. Y.

The United States Asphalt Refining Co., New York, N. Y.

Warren Bros. Co., Boston, Mass.

Several of the well-known manufacturers of corrugated culverts made from rust-resistant iron had on exhibition sections of their culverts in all sizes and photographs illustrating their adaptability for all kinds of culvert construction. These included:

National Corrugated Culvert Manufacturing Co., Middletown, O.

J. Jacob Shannon & Co., Cincinnati, O.

ROCK PRODUCTS

Wheeling Corrugating Co., Philadelphia, Pa.
There was quite an extensive display of wagons especially designed for road work, and also of motor trucks with bodies adapted for this purpose. Those exhibiting such equipment were:

The Bain Wagon Co., Kenosha, Wis.
The Champion Wagon Co., Owego, N. Y.
Columbia Wagon Co., Columbia, Pa.
The Eagle Wagon Works, Auburn, N. Y.
Kentucky Wagon Manufacturing Co., Louisville, Ky.
The Troy Wagon Works, Troy, O.
Watson Wagon Co., Canastota, N. Y.
The Autocar Co., Ardmore, Pa.
Knox Automobile Co., Springfield, Mass.
The Locomobile Co. of America, Philadelphia, Pa.
Merchant & Evans Company, Philadelphia, Pa.
Packard Motor Car Co. of Philadelphia, Philadelphia, Pa.
Peerless Motor Car Co. of Philadelphia, Philadelphia, Pa.

The Universal Portland Cement Co. of Chicago, Ill., and the Wm. G. Hartranft Cement Co. of Philadelphia, Pa., showed what has been accomplished in the building of concrete roads, and the former company had quite an elaborate display of sections of such construction. There were also exhibits dealing especially with reinforcing materials used in concrete road construction. Among them were:

American Bar Lock Co., Philadelphia, Pa.
R. D. Baker & Co., Detroit, Mich.
Edward E. Buhler Company, New York, N. Y.
Clip Bar Manufacturing Co., Philadelphia, Pa.
Steel Protected Concrete Co., Philadelphia, Pa.
Trussed Concrete Steel Co., Detroit, Mich.

Several of the associations of manufacturers interested in various classes of road and street construction and banded together for the wider promotion of the use of their products had booths here. These included the National Paving Brick Manufacturers' Association of Cleveland, O., which devotes itself to the use of brick for streets and roads, and the Yellow Pine Manufacturers' Association of St. Louis, Mo., which conducts a campaign in the interest of creosoted wood paving blocks, and the National Corrugated Culvert Manufacturing Co. of Middletown, O., which is an association of companies all over the country who make corrugated culverts from American ingot iron.

Engineering and surveying instrument makers were also on hand with a complete line of their products, among these concerns being:

Bausch & Lomb Optical Co., Rochester, N. Y.
Buff & Buff Manufacturing Co., New York, N. Y.
W. & L. E. Gurley, Troy, N. Y.
Keuffel & Esser Company, Hoboken, N. J.
Warren-Knight Company, Philadelphia, Pa.

CO-OPERATION ON FAIR LINES NEEDED.

The policy inaugurated by men like the President of the United States, Louis D. Brandeis and others toward the fair treatment of the customer and the bringing about of the standardization of brands which means what they are intended to, that is, emblematic of the goods under which they are sold, is a good suggestion to the cement world. The old southern saying, "All whiskey is good, but some is better than others," is very true, even if the prohibitionists do not agree with that theory. All cement is good, and if properly used should do all the producer claims for it, but the cement brand should mean that it is meritorious goods and when sold by the manufacturer means a standard cement. Based upon this comes the standardization of values, which will mean a closer co-operation between manufacturers not to fix a price that is unreasonable and unfair to manufacturer, dealer or consumer, but an equitable value which will prevail practically all the year. This will be a guarantee to the buyer when he purchases goods that the other fellow is not buying it cheaper. The result of such a happy condition would be a larger use of cement; it would eliminate the speculative feature that prevails in lumber and steel, that makes either a feast or a famine. Both of these prominent industries in this great commercial life of ours had unusual profits two years back, but now prices are creeping so low they are very near the danger line of cost, even worse than that in some particular cases.

It was possible in years past for men to get together and make a price and stick to it, and it was done in many lines of trade, but the effect of the operation of the Sherman law made the strong men fearful of going to jail and gave the weak-kneed fellows, always anxious to cut the price, an excuse for not co-operating.

It is our belief, however, notwithstanding the detective service and peculiar efforts of the Government to find some new monopoly to put on the

grill, that there is a necessity for co-operation between men in the same crafts. They should get together in conference and discover and decide what is the reasonable profit over cost of producing the various kinds of merchandise consumed in this country.

There is particularly now a necessity for the building material trade to get closer together and work on co-operative lines, because the present margin of the dealer is not sufficient to more than barely deliver the goods. With the legitimate dealer this is a mistake, but with the pirate and fellow who wants to work both ends against the middle it is the proper thing. However, if we could ever work out the problem of how much profit belongs to the manufacturer and to the dealer, and if the dealer would be big enough and broad enough to co-operate, a better condition would soon lighten the load at both ends of the operation, and the consumer would not be materially affected. Neither manufacturer nor dealer can afford to demand prices so high that they discourage consumption of building materials; and, when they get the prices too low, nobody gains anything, for it is only a question of months when the manufacturer gets disturbed and forces prices up to an abnormal basis. The consumer who bought his stuff at cost is the only one benefited, while his neighbor afterwards has to pay the market price, and every man should be willing to do that.

Monopoly is not a good thing, unless conducted on better lines than some of our monopolies of the past have been organized and handled. Business without co-operation of both the competitor and customer is a poor business.

ROCK PRODUCTS has often mentioned the word Reciprocity, and if every man in our trades believed in co-operation and had the big word Reciprocity before him every day in the year, and lived up to it, there would be little necessity for cut-throat competition, unfair transactions, and the whole building material industry would be in a more healthy condition. Therefore, let 1914 be an era of co-operation, with a standard brand of Reciprocity—on every transaction of the year.

MASON CONTRACTORS MAY TAKE CITY TEST.

Chicago, Ill., Dec. 9—Creation of a board of examiners for mason contractors with the building commissioners at its head was recommended by the county judiciary committee yesterday, but left the question of salaries to the finance committee.

Under the terms of the proposed ordinance every mason contractor doing business in the city must procure a license, at a cost of \$100 for the original examination and \$50 a year for renewal. Building Commissioner Ericsson urged the committee to make the original license fee \$200 and \$100 annually for renewals.

The ordinance provides for a board of three examiners, one to be the building commissioner, one a practical mason and one an experienced architect, all to be appointed by the mayor.

The object of the ordinance is to bar irresponsible mason contractors from erecting buildings in violation of the city ordinance. A penalty of from \$25 to \$200 is provided for any one working as a mason contractor without a license. The mayor may revoke a license at any time the holder violates the building ordinance.

WANTS FORECLOSURE.

A motion that Frank Becher be permitted to foreclose mortgages against the Connecticut Crushed Stone Co. of Hartford, Conn., now in the hands of A. Carl Sternberg of West Hartford as permanent receiver, was opposed in the superior court Dec. 5 by F. B. Hungerford, representing labor claims against the company. Mr. Hungerford said that the three mortgages are partly for money loaned the company and partly to secure Becher for having gone on bonds to release attachments against the company, and Mr. Hungerford contended that the receiver was the person to straighten this matter out.

Stewart N. Dunning, attorney for the receiver, said that one mortgage of \$6,000 is now due, there is one mortgage of \$7,000 not due except as to interest payments, and a \$10,000 mortgage is to protect Mr. Becher for indorsements on notes and surety on bonds. The receiver, Mr. Dunning said, could not very well sell the equity in the property as is desired to close up matters, unless the mortgages are foreclosed and determined. Henry H. Hunt, who appeared for Mr. Becher, said that the foreclosure actions had been instituted August 6, a temporary receiver was appointed in the person of Mr. Dunning, August 28, and now that the concern is in the hands of a permanent receiver he desires to go with the foreclosure action. Decision was reserved.

QUARRIES

INTERSTATE STONE MANUFACTURERS WILL MEET.

Importance of Annual Convention to Be Held in Columbus, Ohio, in January, Is Openly Declared by Every Officer of the Association.

The Interstate Stone Manufacturers' Association will meet in annual convention at the Virginia Hotel, Columbus, Ohio, January 13-14. S. Percy Hooker, state highway commissioner of New Hampshire, who was formerly chairman of the New York state highway commission, and member of the committee appointed by Governor Hughes to re-codify the highway laws of New York state, will be present to address the meeting. Deputy Highway Commissioner Jos. W. Hunter, of Pennsylvania, and J. Y. McClinton, county road superintendent of Monroe County, New York, have also signified their willingness to be present at the convention. All of these gentlemen of valuable practical experience will assist the program and the officers of the association have put forth their best efforts for an attractive and profitable meeting for every crusher operator and road constructor who takes part in the same.

A broad invitation is extended to crusher operators to attend the convention, regardless of whether they are members of the association or not, as every producer of crushed rock has a common interest and their cordial co-operation is desired.

Frank D. Lyon, of Columbus, Ohio, secretary of the association, in a letter, says: "We believe that the most economical road that can be built to carry ordinary traffic is water-bound macadam with a bituminous carpet coat or cushion, and that traffic needs and requirements and local conditions should determine the type of road where there is heavy or extraordinary traffic. We believe that it is a poor policy for any state, such as Ohio, for instance, to adopt a plan for the construction of any continuous highway specifying any one type of construction. We believe that a careful study of local conditions and requirements will develop the selection of such a type as is suitable. It is a well-known fact that conditions may be such that all that is required for the present at least is shaping, crowning, grading, standardizing as to width, alignment, replacing of culverts, etc., and the surface possibly treated by the use of some foreign material. In such cases it would be unwise and not economical to even construct an ordinary gravel road, and while this condition does not apply to very many miles of state highways, perhaps, in particular sections, still it does in others to a great extent."

A. Atton Hall, president of the Interstate Stone Manufacturers' Association, in referring to the convention, says: "It is our object to educate the people of Ohio and adjoining states on the subject of macadam roads, and the usefulness of crushed rock in the manufacture of the best concrete, and to overcome in a reasonable and comprehensive manner some of the unjust and untrue statements spread broadcast by some of the big interests who do not know as much as they think they do on the subject of roads.

"Our motto is 'Be fair'; we expect to be and it is all we are going to ask of anybody. We do not intend to malign any good road material, but simply propose to push the good old macadam road and we do not care whether it be a paved road or a carpeted road, but we do know that taking the cost mile for mile the macadam road can be built and maintained in perfect condition for much less money than any other road on the market. We feel it is incumbent upon us to let the people know these facts. The matter of original cost and maintenance of a macadam road as compared with any of the high priced roads is a matter of great consideration for the people at large. We propose to see to it that they are informed on this subject. Our members are enthusiastic over the campaign that we are conducting and what has already been accomplished and we hope to have every man who conducts a rock crusher in Ohio and adjoining states take the matter up with us and co-operate with the work that we are doing for a common cause."

"We have established the permanent office of our association in the Hartmann Building, at Columbus,

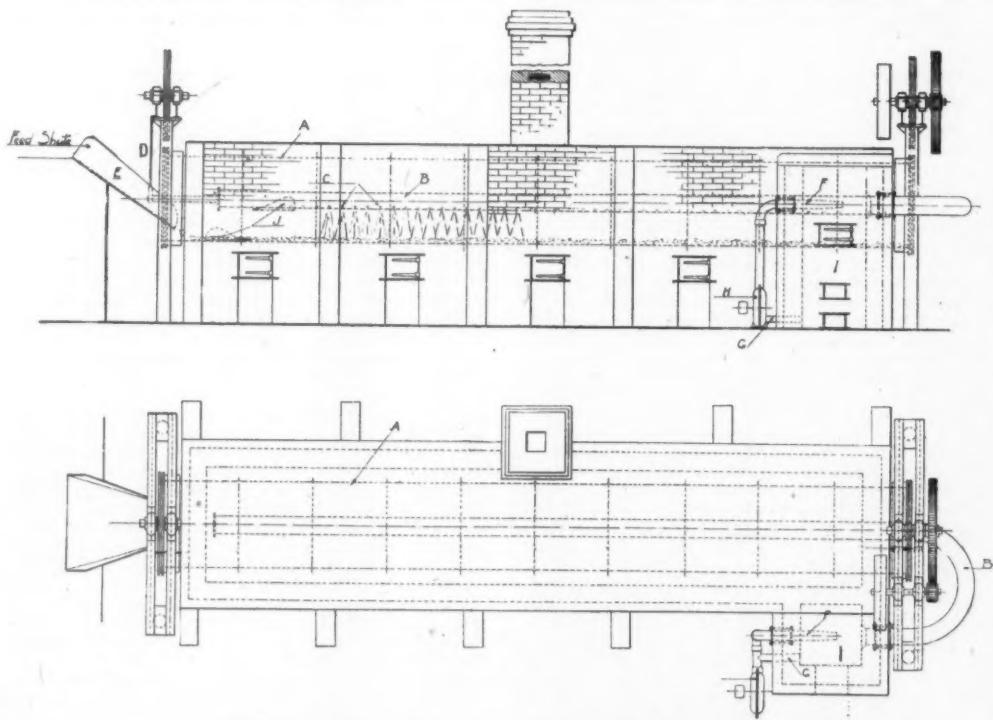
Ohio, and our secretary, Frank D. Lyon, will be only too glad to lend any assistance in his power to our brethren in the quarrying business who are looking for light, if they will drop him a line and let him know that they are interested."

L. H. Hawblitz, of the France Stone Company, Cleveland, Ohio, and treasurer of the Interstate Stone Manufacturers' Association, says: "We have found that as a result of the indiscriminate handling of our material by the various authorities, township and county officials that the results due to their ignorance of handling any kind of material in the construction of highways has paved the way for the concrete and brick people to point with 'holy horror' at that 'awful' macadam road wherein was wasted so many thousands of dollars of the public money. They are always pleased to call the practice of dumping a windrow of rock in the middle of the public road 'water bound macadam' construction. In some sections the active officials in the counties and townships have a very exaggerated idea of what they term the traffic conditions or requirements of their roads. To hear them discuss their local conditions one would be led to believe that Fifth avenue, New York, had been transferred to an inter-county road in Pike county, Ohio, and that in order to take care of the enormous traffic it would be necessary to put down six inches of concrete foundation, two inches of sharp sand cushion, and then provide a wearing surface of the very best Al vitrified brick filled in between with a rich cement grout which is recommended by our fellow highwayman, Will P. Blair, of the Paving Brick interests; or if the other faction happen to get their ear possibly the conditions would be so changed owing to the great dangers arising from flood conditions to construct the concrete road with 'skin coat' of tar on top under the direct supervision and eagle eye of our friend Rader of Pittsburgh.

"The stone producers of Ohio and the adjoining states have come to a point where they are awake to the condition which, if allowed to continue, would mean the supplementing of a very expensive type of road for one of the various macadam types of construction that have stood much heavier comparative traffic in the eastern states than we will have in Ohio, for instance, for the next 25 years to come. We hope to present to the road authorities here and elsewhere a program broad enough and honest enough to merit adoption. We will advocate the construction and maintenance of good earth roads as well as the brick or concrete road each in its proper place with due regard to the public interest."

THE DRYING OF STONE TAR MACADAM.

One of the prime essentials for the proper production of tar macadam is of course that the stone used should be perfectly dry; otherwise the tar does not properly adhere to the stone. Moreover this dryness must not be of a superficial nature, but must be thorough in the extreme. Attempts have been made in the past to drive off any moisture accumulating in heaps of broken stone previous to turning them into tar macadam, but as it has always been a very great difficulty during the process of drying to free the stone from steam and small deposited globules of water, in many cases the stone has been in a worse condition on leaving such a so-called dryer than it was before the process was started. It therefore appears that mechanical means must be employed in order to drive off all moisture successfully and a very simple and yet efficient plant has been devised by Messrs. Ord & Maddison, of Darlington, England, who are themselves large quarry owners and engineers,



PATENT STONE DRYER.—PLAN AND LONGITUDINAL SECTIONS.

A—Dryer Barrel. B—Hot-Air Tube. C—Perforations in Tube. D—Stays for Tube. E—Shute. F—Blast Nozzle. G—Blast Pipe under Grate. H—Fan. I—Furnace. J—Lifter Plates.

which is especially effective in getting rid of the moisture and steam during the process of drying by means of providing an internal hot-air blast arrangement which thoroughly penetrates throughout the stone.

Illustration of the dryer is shown in plan, elevation and vertical cross section on this page. The hot-air blast passes along a tube which is concentric with a revolving cylinder, this tube having a number of small orifices at each end. Hence the blast impinges on to the stone as it traverses from one end of the cylinder to the other. The revolving cylinder is made of steel and is three feet in diameter and 40 feet long. It is hung by steel chains from the top shaft shown and is driven by frictional contact. Internally it is fitted with propulsion plates in order to propel the stone through it and to facilitate the discharge of moisture and steam.

The dryer is enclosed in brickwork and heated externally by small fires. The hot blast pipe passes along the central axis of the cylinder. The rapid drying up of the moisture on the stone and the blowing away of the same materially increases the discharge of the moisture and the combined plant, including the dryer, with an output of ten tons per hour, can easily be worked by three men. The position of the fan and the nozzles by which the hot air blast is conveyed to the perforated tube will be noted from the illustration. This plant is in use by a local tar and macadam company and is, we understand, operating in both cases with perfect satisfaction.

Lovell Baldridge, of Hollidaysburg, Pa., has purchased from Sherman Amick twenty acres of land near Wolfsburg on which there are great quantities of gannister rock. The purchaser expects to open quarries at once and will employ forty men, beginning operations at an early date.

The Johnson's Island stone quarries, which are operated by the Breakwater Construction Co., of Cleveland, Ohio, were closed down Nov. 25 for the winter months, the tug Martin making her last trip of the season in the afternoon. The past season at Johnson's Island has been a very successful one for the Breakwater people and an unusually large amount of stone was shipped out of this port during the past season.

Coleman, Tex., Nov. 28.—The rock crushing plant which has been in operation at Crusher, a small Santa Fe Railway station near here, and which supplied all the ballast used in the Santa Fe roadbed between Coleman and Lubbock, has ceased operations throwing several hundred laborers out of employment. The shutdown is expected to be only temporary. The roadbed between the points named is now nearly all rock ballasted and the shutdown occurs in the absence of further demand for the output of the crusher.

Calvert Quarries Co., Baltimore, Md., incorporated with a capital of \$800,000.

Arabian Mountain Stone Crushing Co., Chattanooga, Tenn., \$25,000 capital stock, incorporated by W. S. Dallas, Robert Marshall, O. F. Janes and others.

The New Orleans Brick & Stone Co., New Orleans, La., capital \$160,000, filed articles of incorporation recently. Buildings to cost \$150,000 are planned. Leo A. Marrero is president and John Lorenz secretary.

The Colorado Quarries & Clay Co., Augusta, Me., organized to acquire real estate, lands, etc., containing deposits of clay, rock or stone of all kinds, and to promote the development of a company for manufacturing and dealing in machinery, materials, etc. President and treasurer, P. Lowell, Augusta.

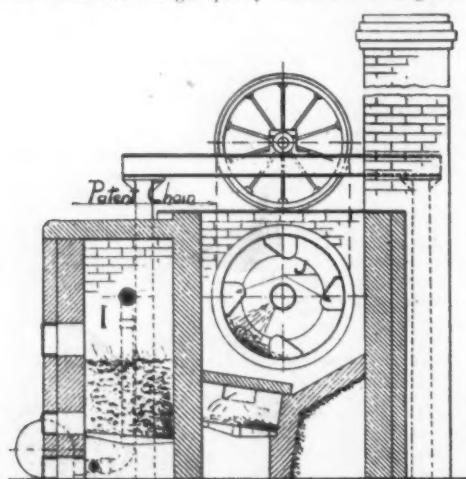
It is reported that M. H. Walker, a well-known capitalist of Green Bay, Wis., and others, are making preparations for locating a new crushed stone plant at Ellison Bay, near Sturgeon Bay, Wis. A site has been secured and it is said that building operations will start soon. Modern equipment will be installed.

The Wisconsin railroad commission has ordered rates on stone between Rockdale and other points, including Milwaukee, Kenosha and Racine, over the lines of the Chicago & Northwestern Railway, to be discontinued and new rates substituted. The new rates will effect a reduction of about 1 per cent per 100 pounds.

The Universal Crushed Stone Company, of Racine, Wis., has filed a trust deed and mortgage, given to the Colonial Trust & Savings Bank, of Chicago, to secure a loan of \$100,000, the amount being necessary to liquidate a floating debt. The company operates three quarries in Racine county, two at Ives and one at Horlicksville.

The Canajoharie Stone Co., Canajoharie, N. Y., has been incorporated with the secretary of state, with a capital stock of \$20,000. The directors are Peter V. Baird and Frank Baird of Amsterdam, N. Y., and Frank W. Allen of Canajoharie. A new crushing and grinding plant has been erected on the premises and a business of considerable size established.

A solid wall of limestone, more than 600 feet long, 110 feet high and 30 feet deep, was torn loose from the side of McAfee Mountain, near Newton, N. J., on November 20, when ten tons of black powder and five tons of dynamite were successfully exploded in the quarry of the Bethlehem Steel Co. It is estimated that about 60,000 tons of limestone were dislodged. Not a building near the mountain was damaged, although the shock was felt for miles around.



PRODUCTION OF CRUSHED STONE IN 1912, BY STATES AND TERRITORIES AND BY USES, IN SHORT TONS.

State or Territory.	Road making.		Railroad ballast.		Concrete.		Total.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Alabama	85,754	\$54,270	30,298	\$14,093	65,144	\$38,235	181,196	\$106,598
Arizona	1,875	2,250	14,950	13,000	11,703	20,956	28,528	36,206
Arkansas	129,577	104,258	17,295	115,725	125,236	107,605	432,108	327,588
California	1,451,487	964,300	948,046	548,578	1,157,665	808,847	3,557,198	2,321,723
Colorado	14,860	15,350	1,222	376	2,945	3,149	19,027	18,875
Connecticut	441,828	288,548	211,460	89,645	314,605	194,119	967,893	572,312
Delaware	30,614	27,861	20,100	14,070	29,533	24,536	80,247	66,467
Florida	84,224	57,836	43,500	15,000	23,514	25,646	151,238	98,482
Georgia	35,621	33,927	42,695	53,223	206,818	199,754	285,134	286,904
Hawaii	105,147	128,854			75,595	94,140	180,742	222,994
Idaho	14,978	10,131	25,000	16,000	5,750	4,600	45,723	30,731
Illinois	2,643,251	1,083,803	960,602	368,349	2,035,113	963,617	5,638,966	2,415,769
Indiana	1,771,521	1,033,673	286,186	102,841	72,603	45,197	2,130,310	1,181,711
Iowa	37,567	30,821	601,137	235,326	422,332	404,877	1,061,036	671,024
Kansas	126,078	95,642	560,322	274,176	317,112	234,261	1,003,512	604,079
Kentucky	514,124	319,057	1,024,538	473,023	200,209	109,355	1,738,871	901,435
Louisiana	10,197	8,158	15,351	12,281	47,776	38,221	73,324	55,660
Maine	7,090	5,062	18,666	14,000	6,627	5,075	32,333	24,137
Maryland	489,921	360,726	383,371	212,879	144,634	133,674	1,017,926	707,279
Massachusetts	460,564	431,162	14,651	13,985	934,432	741,835	1,409,647	1,186,982
Michigan	625,358	313,815	54,327	28,368	196,778	106,638	876,463	448,821
Minnesota	76,783	65,952	59,905	40,642	328,445	287,600	465,133	394,194
Missouri	333,591	262,438	599,799	387,449	837,096	674,986	1,770,486	1,342,873
Montana	4,141	1,365	184	101	30,593	18,115	34,918	19,581
Nebraska	40	20	9,037	5,985	275,430	252,063	284,507	258,068
New Hampshire	5,270	2,875	2,022	2,527	24,178	20,228	31,470	25,630
New Jersey	855,537	679,768	417,482	206,136	515,311	395,142	1,788,330	1,341,046
New Mexico			710,149	326,022	15,325	7,950	725,474	323,972
New York	1,978,666	1,256,354	1,441,326	742,156	2,333,612	1,466,316	5,753,604	3,464,826
North Carolina	76,746	70,985	116,664	33,254	209,265	206,579	402,675	310,818
Ohio	3,595,221	1,675,300	2,093,441	787,486	600,720	305,267	6,289,391	2,768,053
Oklahoma	89,413	60,862	340,936	178,440	183,680	111,435	614,029	350,737
Oregon	150,587	128,272	28,028	14,636	176,070	102,013	354,685	214,921
Pennsylvania	1,506,457	948,304	1,249,713	723,476	1,205,257	754,231	3,961,427	2,426,071
Rhode Island	58,377	64,777			19,508	24,140	78,085	88,917
South Carolina	40,719	41,252	22,926	21,234	68,035	67,878	131,680	130,364
South Dakota	3,875	4,160			67,671	54,598	71,546	58,758
Tennessee	325,964	268,509	267,267	114,011	214,007	127,076	807,238	509,596
Texas	79,694	52,753	110,212	49,956	633,301	434,332	823,207	537,041
Vermont	2,700	1,975	5,000	2,000	21,396	15,007	29,096	18,982
Virginia	140,697	112,496	300,240	166,856	222,684	156,889	663,621	436,241
Washington	166,926	96,775	5,645	2,847	40,659	29,591	213,230	129,213
West Virginia	40,938	27,440	700,669	328,871	234,883	100,855	976,490	457,166
Wisconsin	755,795	370,559	75,983	26,726	612,741	335,568	1,444,519	732,853
Wyoming	452	703			5,731	6,133	6,183	6,836
Total	19,370,425	11,563,458	13,990,345	6,835,749	15,271,731	10,258,329	48,632,501	28,657,536

STONE COMPANY FORMED.

The United States Stone Co., of Little Rock, Ark., with Zeb Ward, president, J. J. Ball, vice-president and W. D. Cammack, secretary-treasurer, was incorporated Dec. 3, to fulfill a contract with the federal government for 25,000 tons of stone to be used in levee and Mississippi river work at Arkansas City. The company is capitalized at \$50,000, with \$20,000 of capital stock paid up. Chris Ledwidge is the fourth member of the board of directors.

The stockholders for several years have been selling stone in large quantities to the government, but this was done individually and the company was formed to fulfill contract recently drawn. The government in the last two or three years has purchased stone from the members of the company approximating in value \$200,000. All the stone purchased was used in Mississippi river work and all was quarried from Arkansas quarries.

WOODRUFF & PAUSCH STONE CO.

In the reorganization of the Woodruff & Pausch Stone Co., Columbus, Ohio, to result from the absorption of the Casparis and Marble Cliff companies, it is not expected that the personnel or management will be materially changed. This was the statement Nov. 26 of an officer of the company, who said that this action would relate largely to an increase in the capital stock. The present officers of the company are: John W. Kaufman, president; Charles Woodruff, vice president; William H. Hoagland, general manager and Robert Pausch, secretary and treasurer.

The Standard Crushed Stone Co., of Niagara Falls, N. Y., has purchased 72 acres of quarry land in the vicinity of Bridgeburg, N. Y., adjacent to the Windmill Point district, which it will develop into a stone quarry. A crushing machine has been installed, and about 50 hands will be put on just as soon as the quarry is put into full operation.

THE CRUSHED STONE INDUSTRY.

A striking increase has been noted in the crushed stone industry. For four or five years prior to 1900 crushed stone was used chiefly for road making and ballast, but figures for 1912 show that crushed stone for concrete and cement took the place of a great quantity of building and foundation stone. The exact figures illustrating the comparison of the value of building stone and crushed stone for the year 1912 are as follows: Building stone (rough and dressed) \$16,306,759; crushed

VALUE OF THE PRODUCTION OF LIMESTONE IN THE UNITED STATES IN 1912 BY STATES AND USES.

State.	Crushed stone.			Flint.	Sugar factories.	Other.	Total.
	Road making.	Railroad ballast.	Concrete.				
Alabama	\$6,270	\$14,000	\$20,315	\$32,105	\$12,400	\$600	\$51,085
Arizona	1,000	10,000	10,000	2,000	2,000	200	24,000
California	61,138	104,000	8,138	65,200	25,684	265,225	326,907
Connecticut	27,440	15,485	15,485	1,000	1,000	14,000	44,985
Florida	1,000	1,000	1,000	1,000	1,000	1,000	4,000
Idaho	1,131	1,131	1,131	1,131	1,131	1,131	10,791
Illinois	1,000,672	100,841	50,517	861,517	50,517	50,517	1,602,646
Indiana	20,621	20,620	20,620	20,620	20,620	20,620	81,861
Iowa	20,621	20,620	20,620	20,620	20,620	20,620	81,861
Kentucky	1,000,672	100,841	50,517	861,517	50,517	50,517	1,602,646
Louisiana	1,000,672	100,841	50,517	861,517	50,517	50,517	1,602,646
Maryland	10,627	10,627	10,627	10,627	10,627	10,627	21,254
Massachusetts	10,627	10,627	10,627	10,627	10,627	10,627	21,254
Minnesota	20,621	20,620	20,620	20,620	20,620	20,620	81,861
Missouri	20,621	20,620	20,620	20,620	20,620	20,620	81,861
Nebraska	1,000,672	100,841	50,517	861,517	50,517	50,517	1,602,646
Nevada	1,000,672	100,841	50,517	861,517	50,517	50,517	1,602,646
New Mexico	10,627	10,627	10,627	10,627	10,627	10,627	21,254
North Carolina	10,627	10,627	10,627	10,627	10,627	10,627	21,254
Ohio	1,071,000	700,000	700,000	1,000,000	1,000,000	1,000,000	4,000,000
Oregon	400,043	300,013	400,043	400,043	400,043	400,043	1,600,169
Pennsylvania	1,000,672	100,841	50,517	861,517	50,517	50,517	1,602,646
Tennessee	100	100	100	100	100	100	400
Texas	300,000	300,000	300,000	300,000	300,000	300,000	1,200,000
Utah	100	100	100	100	100	100	400
Virginia	100	100	100	100	100	100	400
Washington	100,000	100,000	100,000	100,000	100,000	100,000	400,000
Wisconsin	100,000	100,000	100,000	100,000	100,000	100,000	400,000
Wyoming	100	100	100	100	100	100	400
Other States	8,148	8,148	8,148	8,148	8,148	8,148	32,592
Total	7,100,940	4,000,000	5,000,000	9,000,772	350,100	1,000,000	20,720,842

^a Includes Louisiana.

^b Includes Louisiana, Maine, Massachusetts, Nevada, Oregon, and Rhode Island.

stone, \$28,657,536. This comparison is made with the figures for building stone, as prior to the advent of crushed stone, building and monumental stone were the chief products.

On this page appears a table showing the value and quantity of crushed stone produced in the United States in 1912, by states and territories.

(Insert Table A)

According to this table nine states in 1912 produced crushed stone valued at more than \$1,000,000, as follows, by rank: New York, Ohio, Pennsylvania, Illinois, California, New Jersey, Missouri, Massachusetts and Indiana.

Also reproduced on this page is a table showing the quantity and value of crushed stone produced in the United States in 1912, by uses and kinds of stone, in short tons.

Quantity and value of crushed stone produced in the United States in 1911 and 1912, by kinds and uses, in short tons.								
Kinds	Road making.		Railroad ballast.		Concrete.		Total.	
Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	

<tbl_r cells="9" ix="4" maxcspan

... FOR THE ... RETAILER

THE NATIONAL BUILDERS' SUPPLY ASSOCIATION. (Meets Annually.)

Officers.

President—Edward S. Walton, Youngstown, Ohio.

Treasurer—Henry W. Classen, Baltimore, Md.

Secretary—Frank J. Davis, Youngstown, Ohio.

SECRETARY DAVIS DISCUSSES N. B. S. A. MEETING

Frank J. Davis, the energetic and progressive secretary of the National Builders' Supply Association, through the columns of ROCK PRODUCTS, wishes to convey the following message to dealers in builders' supplies. Mr. Davis is an enthusiastic worker, and has materially strengthened the parent builders' supply organization in several of its departments.

"The past year has been a very successful one for the National Builders' Supply Association on their reduced basis of dues, which went into effect last February. We have been receiving applications for membership every month and expect to receive a number of new members before our next convention. Ten dollars per year is the amount now charged for dues in the association, and judging from the number of new members who are joining at this price seems to be very popular.

"Last summer the Ohio Builders' Supply Association affiliated with the National, and it is the intention of the officers of this association to continue this work until all kindred associations are affiliated with the N. B. S. A. If they meet with the success they expect in their efforts by affiliation, the same conditions and relations will exist among the building supply dealers that exists between various state governments and the Federal government at Washington. As the dealer would be largely benefited by the National association being a representative body, he should do his utmost to enable the association to carry on the work on these lines.

"The dealers throughout the country are beginning to see the need of associations as a help to them in their business, and the means of saving money in carrying on their work. I know of a dealer who saved a considerable sum of money for his concern by some information he secured at one of our conventions. The wide-awake, up-to-date dealer will not say, 'What good will a membership in your association do me?' because he knows that he is well repaid for the small sum he pays for each year's dues.

"At the Hotel LaSalle, Chicago, February 17-18, 1914, the National Builders' Supply Association will hold their 15th annual convention, and for several very good reasons we predict the biggest and best convention that the dealers of this country have ever held. On account of its central location, Chicago is accessible from almost any point in the United States, and this, together with the fact that the only Cement Show to be held in the United States in 1914 will be held during the week of this convention, should be the means of breaking all previous records of attendance. This Cement Show gives the dealer an additional educational opportunity—and remember, it will be going on the same week as the N. B. S. A. convention.

"The program for the convention is just about completed and will be both interesting and educational. You will have the opportunity of hearing some of the most prominent and experienced men in the building supply industry discuss the following subjects:

"Concrete Roads as a Help to Dealers; 'Employees' Compensation and Employers' Liability; 'Team Efficiency; 'Show Rooms for Retail Dealers and Specialty Department Work; 'Competitive Relations and Price Problems; 'The Coal and Ice Business in Connection With Builders' Supplies; 'Sales Promotion and Organization; 'Dealers' Profits; 'Trade Union Principles in Our Business; 'National One-Cent Letter Postage,' and 'Prosperity and Confidence.'



A BIG LOAD.

"The above is only part of the very instructive program that is being arranged, and we want every dealer in the United States to prepare to be with us on the 17th and 18th of February. Our local committee is arranging details on the ground and everything points to a very successful convention. Whether you are a member of the N. B. S. A. or not, make your plans to attend, and we assure you of a hearty welcome. You cannot afford to miss this convention—and bear in mind that you are cordially invited to be present by the officers and directors of the N. B. S. A."

country is practically free from speculation and the country as a whole is living more within its income than has been the case for several years. The majority feel that shortly after the first of the year other hopeful signs will be in evidence that will encourage the building material dealer to once more assume his usual optimistic viewpoint.

ROCK PRODUCTS thanks its patrons for their undivided loyalty and wishes you all A Merry Christmas and A Happy New Year.

PACIFIC COAST RETAIL BUSINESS INACTIVE.

San Francisco, Dec. 10.—Business in practically all lines of building material has been greatly curtailed during the last month, and from all indication building conditions in the larger towns of the Pacific Coast are about as quiet as they are likely to be. This is attributed mainly to the financial situation, as it has been practically impossible to borrow money for any kind of building; but local business has also been retarded by the heavy rains of the last month, which naturally interfered with construction work of all kinds. The November building record for San Francisco was far lower than last year, though somewhat better than for October; while in Los Angeles, San Diego and Oakland the month's valuation was less than half that of November, 1912. Work is still going on fairly well in some of the smaller towns, and retail trade in the country is as good as could be expected under the circumstances, as the rain has encouraged farmers to make many improvements which were postponed during the dry weather.

Notwithstanding the present dullness, there is an underlying current of strong optimism in the trade, and confidence is generally expressed that the worst is over and next year will bring a marked improvement. Bond issues for municipal buildings and improvements have been sold with little difficulty, and there are indications of a general improvement in the money situation; while the crop outlook is exceptionally bright, the Exposition is having some effect, and the opening of the Panama Canal is expected to have beneficial effects all over the Coast territory.

A SUMMARY OF 1913.

Taken all in all, the year 1913 has been quite satisfactory to most dealers, and adequate in point of materials disposed of. While the year as a whole has hardly demanded the quantity of supplies which were handled during the preceding year, yet the number of building operations was correspondingly smaller than in 1912 while prices were generally satisfactory everywhere. Since it is results that count, it must be admitted that the average dealer has enjoyed a fairly prosperous year and the sum total of the building operations figures up a substantial amount of business booked.

The first quarter of the year was indeed gratifying to nearly all dealers, although in many sections during the summer and fall period a slump was noted due to contingencies of one kind or another which restricted the amount of materials used.

That the demand for building material has been falling off faster than is usual at this season of the year cannot be contradicted, yet there is no reason to expect that it will be attended with serious hardship. In certain branches of the trade a goodly volume of orders is being handled. Dealers in building material are pursuing a very conservative policy and most of the orders given out are for small lots with the idea of providing only for immediate requirements. There has seldom been a year when stocks in the dealer's yards were smaller and when the average merchant was providing more conservatively for the future.

An encouraging sign of the time is that the entire

GOLDEN TEXT.

In checking up the situation of 1913, with a view to giving proper consideration to the making of a successful plan of operation for 1914, there is a full realization of the fact that the dealer has not made any money out of his business in any way commensurate with the amount of effort expended or the capital invested. He finds that his gross return is barely more than 25c per ton for the total supplies handled, and this is not enough to actually earn six per cent net upon his investment in warehouses and teams and equipment, to say nothing of the risk of doing business, collections and bad accounts.

This has been the case for several years and the encouragement to spur on the enterprise of the dealer to work for larger sales for the products which he handles is very low. As a matter of fact the total cost of masons' supplies used in any building operation consisting of rubble stone or crushed rock, brick, lime, cement and plaster make up an insignificant fraction of the total cost of the building as to make one consider that the selling prices of all these goods is entirely too low. It is not the case with lumber by any means. The bill for joists, for flooring, for partition material, for lath and rough lumber and shingles will always amount to three or four times as much as the total bill of mason materials and staple supplies.

We have it from direct testimony of the dealers in every part of the country, some of them residing in the great city where there are extensive building operations each year, listed in the commercial reports of the country, and others residing in smaller communities where there are only a half-dozen or so building operations carried to completion in a season. These reports all make one resounding chorus to the effect that the margin of possible profits is so low that the handling of staple building materials is not an interesting part of the business, so that those whom we are accustomed to classify as dealers in building materials and supplies do not themselves consider that they are dealers in such goods, but that they merely carry a small stock of these goods for the transient accommodation of their customers. They consider themselves to be sometimes lumber dealers; sometimes they consider themselves to be in the local teaming business, and they look upon that part of their time which is devoted to the handling of building materials and supplies as a troublesome, expensive and quite unprofitable feature of their operations.

There are possibly no less than 3,000 such dealers in the United States to whom the description "Dealer in Builders' Supplies" would have no meaning for they do not consider themselves to be that. If the man who handles a car of Portland cement, a car of hydrated lime, or a car of hard wall plaster, should find about the time that the last few bags remained that he had made a net profit of 12½ per cent upon that item, there would be an incentive for him to put forth some effort to increase his volume of business in these particular directions.

As we hear it from the dealer, he gets from 10 to 12 per cent net profit in handling a carload of hydrated lime; he gets from 8 to 10 per cent profit in handling a mixed car of hard wall plaster, while in handling a carload of Portland cement he can only find from 3 to 6 per cent net profit. These figures are probably the net average to the dealer, sometimes running lower than these figures and in some cases a little higher. In all of those cases where the margins run lower than those stated the dealer is actually handling Portland cement at a loss; he is scratching about even on hard wall plaster and making 3 to 6 per cent on hydrated lime.

At first glance one will say that it is palpably the dealer's fault; that he should sell his goods at a living profit, commensurate with his volume of business, the capital he has invested and the amount of effort he is putting forth, and if he finds he cannot do this, that he had better drop out of the business. Now that is exactly what a great many have done, but as we said before, there are a number of these dealers who feel that their operations in other lines forced them to handle building material and building supplies, and since his presence in the business is somewhat of a sacrifice anyhow, he is prepared to accept it as an unavoidable nuisance and hopes to make his profit in other directions.

In the big cities the dealers depend upon the volume of the tonnage that they handle and the economies which they can derive by the investment of considerable money in their delivery system, and another factor that contributes to the big city dealer is his extensive establishment and reputation, which makes him eligible to the contract for the

delivery of the materials for a very large job. But take it all in all, the business of handling and selling building materials and builders' supplies is one that is conducted upon a very narrow margin and there has never been any very successful attempts at organized co-operation amongst the dealers for the purpose of adjusting their business on a basis where reasonable mercantile profits may be derived for the business which they conduct.

An intelligent and fair understanding between the dealers in any given community would enable them to all readjust the basis for doing business into something that is sane, equitable and altogether honest to themselves and the people with whom they do business. It is evidently not to the interest of the manufacturers who sell their products to dealers for those dealers in turn to conduct a business which is not netting them a fair return, because such people are likely to abandon the business without notice, or to have more or less shaky credits in time of commercial distress.

The manufacturer sells his dealers upon the basis of 30 days net. The goods have just about arrived and been stored in the dealer's warehouse when the 30 days are up, so that it amounts to a spot cash transaction between the dealer and the manufacturer, and as the ordinary building operation is conducted in this country the dealer carries the major part of the contractor's order on his books for 90 to 120 days, and the last half of practically every account is closed off in just about six months from the time that the first delivery was made on any given job. So the dealer carries half of the account for six months without interest and his money tied up in the job to which he is furnishing supplies very often wipes out the total profit that he has made in some of the items included in his bill.

It is impossible for the dealer to do business with the average contractor on any other basis than to take a part payment each month as the job progresses and to carry on an ever rolling up account until the job is finished. One bad account, even though it is small in amount, will wipe out the profits on several other accounts, and if the dealer was not in a position to charge for his teaming he would come out a big loser on every season's operations. It should not be so; the dealer should be in a position to make some small margin of profit upon every item handled by him and delivered at the job over and above the current cost of teaming in the community in which his operations are located.

In other words, if in a season a dealer handles 5,000 barrels or 20,000 bags of Portland cement, he should make a net profit on that cement of 10 cents net per barrel, or \$500 over and above the cost of warehousing and teaming, and this would be no more than the normal interest on his money if put out at interest with first mortgage real estate security. The same thing is true of the tonnage of hydrated lime that he handles, or of hard wall plaster. Usually the dealer who handles sand and crushed rock will make a reasonable margin on those commodities, because the source of supplies are somewhat limited or more closely controlled than are the staple supplies.

This is a matter for each and every dealer to take home for himself and to think over quietly as he sits beside the office stove and does his little figuring when it is too early for him to think about getting his teams busy with the ice harvest, and after all his principal customers have already got in their winter supply of coal, for many of the average dealers in the smaller towns are handling coal and are interested in the ice harvest, because they have teams which need exercise in the winter time after working steadily through the summer, delivering material and building supplies on the small margin that we have just been discussing.

Now about the middle of February the National Builders' Supply Association will hold its annual convention in Chicago and there will be gathered many of the extensive dealers in the large cities of the country and a few others. Every dealer in the United States should be present and there will be other meetings of the smaller associations of supply dealers confined to the states and in commercial districts. They are there for the purpose of talking about Co-operation and Reciprocity, the one with the other, and these are the standard watchwords which Rock Products has raised and gone over with them from time to time; but the thing that is going to be needed in 1914 is for the dealers to Co-operate with one another and offer such Co-operation with one another, get down to a heart-to-heart basis of Reciprocity with the manufacturers of the staple products of builders' supplies.

Such action, such co-operation, such a system of reciprocity would be beneficial to both the manufacturers and the dealers upon the gratifying basis of reasonably profitable business for

both branches of the greatest and most important trade, namely, the improvement of real estate.

The first thing essential is for the man who is a dealer to realize that he is a dealer in builders' supplies, and recognized as such by the manufacturer who sells him his goods and by his competitor, and by the community where he is located. As soon as he realizes that he is a merchant known as a dealer in building materials and builders' supplies, then he will realize it is up to him to be a successful merchant of that kind and description; and to be a successful merchant in that particular line it will be necessary for him to realize the real cost of doing business as such a dealer.

With all of these facts fully realized he simply will not sell his goods below cost and when he charges a profit for his goods his neighbor will go and do likewise, because every man in the business realizes that there has got to be a better margin in the business to prevent losses which are liable to occur at any time, and at least by the very narrowness of the margin is making constant dissatisfaction.

In the matter of reciprocity there is absolutely no question. There is no other way for the manufacturers to do but to join in with the dealer for the reason that no successful distribution of staple builders' supplies can be profitably made without the dealer and his sideline, his warehouse and his team equipment. If the dealers were all co-operative in the upward and onward movement for better conditions they could afford to be more enterprising, and thereby with a co-operative movement increase the demand for the products of the mills and the mines and the kilns of the manufactories of the staple supplies.

Let this be the watchword; let this be the golden text of the thoughts and the decision of the dealers who are prepared to go into action for the season of 1914.

KELLASTONE FILES PETITION IN BANKRUPTCY.

The United States Kellastone Company, 332 South Michigan avenue, Chicago, filed a voluntary petition in bankruptcy in the United States District Court on October 29. William Friedman, attorney for the petitioner, said the liabilities were about \$65,000 and the assets about \$25,000. The petition expressed the willingness of the company to surrender all of its property to the creditors and further, that suits have been brought against the company which it is unable to defend and that it owes debts which it is unable to pay in full. Aaron Bodenweiser is president of the company, which is capitalized at \$1,000,000. Attorney Friedman said that as the larger creditors are not pressing their claims, a reorganization of the business may be possible.

The United States Kellastone Company joined the National Builders' Supply Association last year as an associate member and made a systematic canvass of the membership boosting their new product in practically unlimited representation. Rock Products received numerous communications for an opinion with regard to the product and to verify some of the statements that were made. We were very careful to give the associate member of the association a very fair presentation of fact, but the investigations which were made by our staff representatives did not bear out the statements in full that were made in the claims of the printed matter of the Kellastone Company. Kellastone is a type of plaster in which mineral oil is one of the constituents and it seems that it is in the hands of able promoters who are not sufficiently technical to produce a dependable article, if it is possible to make a dependable article by the processes and with the materials which they use. The advertising campaign of the Kellastone Company in the early part of last summer was very extensive and very expensive, so that we heard a great deal about their activities for several months; but this has not been followed up, nor have all the people who were at first enthusiastic maintained their enthusiasm, and we note a number of disappointments where Kellastone was extensively exploited.

PACIFIC CEMENT MANUFACTURER DEAD.

Wakefield Baker, president of the Pacific Portland Cement Company, the California Building Materials Company and the wholesale hardware house of Baker & Hamilton, of San Francisco, dropped dead of heart failure on the afternoon of Dec. 7. He was on the Southern Pacific ferry on the way to San Francisco from an automobile trip to the Pacific cement plant, accompanied by Mrs. Baker and a friend of the family, and was suddenly taken with an attack of faintness, dying almost instantly. Mr. Baker was a native of Cambridge, Mass., and was 47 years of age.

OHIO DEALERS TO MEET.

A Strong Attendance is Anticipated—Important Topics to be Discussed.

In the month of January the members of the Ohio Builders' Supply Association will assemble in convention. This annual announcement, which recently emanated from the headquarters of the association is always heralded with tremendous interest by not only the dealers in the state of Ohio but builders' supply dealers everywhere who read the reports of the meetings of this progressive and representative bunch of dealers who have absorbed the organization idea and demonstrated the advantages which accrue from the same. The workings of the Ohio organization are well-nigh perfect. Year after year this body has been in the vanguard of the march towards better methods, better materials and better laws for the protection of the dealers in the state of Ohio. The organization can indeed point with much pride to achievements which have more than justified the more-or-less difficulty encountered in the plan of getting together and running smoothly on the same track.

Howard B. Arnold, president, deserves great credit along with the other able and energetic officers of the Ohio Builders' Supply Association for the enthusiasm and co-operative spirit which always dominates the meetings of the body. The following letter from President Arnold is in itself edifying, and a striking example of the forcefulness with which this and all other questions for the betterment of the association are handled:

"We will hold our annual meeting at Columbus, Ohio, Southern hotel, January 21, 22 and 23, 1914. The executive committee selected Columbus for the reason that we felt we could get a bigger attendance there on account of its central location. I sincerely hope all the dealers will appreciate the situation and attend our meeting. We are going to have the best meeting we have ever held—so it is up to every dealer to be there and find out what we have in store for him. It is a 'cinch' that he can't find out by staying at home.

It is a good chance for the dealer to find out what his organization can do, while the Boss is away. The Boss can talk with the other men in the same line of business and find out how the other fellow has stopped leaks or handled other difficult and trying propositions. If every dealer attending our meeting picks up an idea that will make him only \$25 or \$50 in a year, his trip is paid for and an improvement made in his business.

"Co-operation—think just a minute. That is a word every dealer should give a great deal of attention to and never lose sight of. Co-operate with your customer and your competitor. The year 1913 in Dayton, Ohio, has shown us that co-operation and organization is the only way to get results. We have gotten results in Dayton—and Why? Because we joined together and got what we wanted and needed. Results could never have been gotten by individuals. Dayton has certainly come back, via Co-operation and organization.

"The lien law is the best basis of credit that the dealers of this state or any other state ever had, and we must work and watch to see that the law is not annulled or changed. We can get our money now and get it promptly. We have been 'bum bankers' long enough.

"There will also be a bill introduced providing for bonds being given on all public work, that will guarantee all labor and material bills. This bill must be backed by every dealer, who must see that members of the legislature from his district vote for this bill.

"Now, every dealer in Ohio should make it his business to be at Columbus and find out just what we are doing and expect to do in the future. We are going to have good short, snappy talks and discussions. For one thing, J. P. Beck, of the Universal Portland Cement Company, is going to address us on 'Advertising that is Profitable to the Dealers.' It will pay every dealer in Ohio to hear this talk.

"Here is a question I would like to ask each and every dealer: 'Are you selling your materials and your service, or are you just making prices?' Come to Columbus, we will show you the difference. The competition you offer is the service you give, not the low price you make."

KIESELGUHR CO. STARTS CAMPAIGN.

The Kieselguhr Company, of America, marketing and producing "Sil-O-Cel," a fireproofing, sound-deadening and insulating product mined in southern California, has opened offices at 932 Monadnock building, San Francisco, under the management of W. S. McLean, formerly of the Holmes Lime Company, and has gone actively into the work of introducing its product for building construction. At

a fire test recently held in Alameda, some remarkable results were secured, and a larger test will shortly be held in San Francisco. Mr. McLean is assisted in this work by C. G. Gobel, superintendent of construction for the company. Mr. Gobel was formerly a contractor of Chicago, where he did the masonry work on the new Postoffice.

The company's plant at Lompoc, Cal., where the material is mined and put through processes rendering it available for various uses, has lately been greatly enlarged, and many experiments are being made to prepare the material in forms fitted for different classes of building work. Arrangements are also being made to put in an establishment at Los Angeles. The company is now getting out material in powder form for insulating and fire-proofing between studs in wooden construction, and is experimenting with a floor slab on the line of the MacKay System, for use with wooden joists. Commercial brick, weighing one pound, ten ounces each, are also being produced, as well as fire brick.

JAHNCKE RE-ELECTED EXCHANGE PRESIDENT.

The Contractors' & Dealers' Exchange, of New Orleans, one of the most consequential, active and influential industrial bodies in the South, held its annual election of officers and directors on December 8 last. A deserved tribute to proven ability was paid when, without contrary suggestion, Walter F. Jahncke was re-elected to the presidency—the third time that this highest honor within the



WALTER F. JAHNCKE, NEW ORLEANS, LA.

gift of the exchange has been conferred on him.

Under the leadership of President Jahncke, supported by directorate equally as capable, the exchange, which always has wielded without fear or favor, heavy influence in all that has pertained to the welfare and advancement of the best interest of New Orleans, has progressed steadily upward. Previous administrations have accomplished splendid advancements.

President Jahncke's administration, during two years past, has advanced chapters which may be said to have marked progress entirely abreast of the times, an accomplishment which is to be rated something more than difficult under the adverse conditions which have been and yet are prevalent in the business and industrial world throughout this country. President Jahncke is rated as one of the ablest, most far-seeing of New Orleans' younger business men and is classed as an expert in the general handling of building material and builders' supplies, having had his training in that line from earliest youth. He is the general manager of the Fitz Jahncke, Inc., a firm of long business standing and known throughout the building supply trade of this country.

The Pittsburgh Limestone Co. has resumed operations in full at its plant at Winfield, Pa. It has two mills now shipping limestone steadily. The offices of the company are at New Castle, Pa.

PITTSBURGH RETAILERS.

Year Now Ending Has Been Profitable to Supply Dealers—Many New Projects Listed for 1914—Western Pennsylvania Dealers to Meet in February.

Pittsburgh, Pa., Dec. 20.—The season just winding up has been very much better in general than the year 1912. Building has been on a larger scale, especially downtown building. Municipal improvements of great magnitude have been going forward. The city trade on this account has been more satisfactory. In fact, most retailers in builders' supplies are free to admit that they have made some money this year instead of just about getting out even, as has been the case for the past few years. Outside-the-city business has been very good until quite recently. Bond issues have been many and these have given the opportunity for a large amount of public work, including new streets, bridges, roads, etc. Also, there has been a considerable amount of Government work on the rivers and prospects are that next year there will be even more of this business. Building prospects for 1914 are good—that is, providing that the money market and the labor situation permit builders to go ahead with proposed projects. Just now everything is quiet. Business in all lines is fairly dull. Builders' supply men are getting ready to take stock and for this reason there is little expected during December.

J. A. Ferguson, superintendent of the City Building Inspection Bureau, addressed the Pittsburgh Builders' Exchange at a late November meeting at its headquarters in the Fulton building. The Pittsburgh Chamber of Commerce and the Pittsburgh Flood Commission are taking active part in urging upon Congress the speedy canalization of the Ohio river. Some big improvements will go ahead next year if the proposed appropriation of \$50,000,000 is secured for this project.

Booth & Flinn, Ltd., are to be congratulated on having finished their hump contract 65 days ahead of time and thus ending the just claim for \$6,500 or \$100 a day bonus. The removal of the hump was to have been completed January 1, 1914, and on October 23 the work was completed, just 18 months after the first paving block had been lifted.

Pittsburgh Builders' Exchange during November conducted a very successful membership contest. For the largest number of applicants S. P. Trimble was awarded the first prize, a very handsome suit case. Knox A. Strouss, of Knox, Strouss & Bragdon, came in second and received a traveling bag, and L. H. Meyers got a similar prize for the third largest number. The largest number of applications filed the first week was by G. H. Danforth. The membership of the exchange is now almost 300.

The builders' supply dealers held a very enjoyable banquet at the Fort Pitt Hotel, Tuesday evening, December 9. A large attendance was on hand and some mighty live talks were features of the meeting.

As showing some of the things which Pittsburgh has to hope for next year and which will contribute very largely to the income of builders' supply dealers, the following facts are interesting. During the past few weeks these plants have been secured for next year's building in the Pittsburgh district:

The Ford Motor Car Company, of Detroit, will build a \$900,000 plant this winter at Baum boulevard, Morewood avenue and the F. R. R.

The Gibson Motor Car Company, capital \$1,000,000, of Pittsburgh, will build a large factory at Monaca, Pa., 25 miles down the Ohio river.

The Cooke-Wilson Electrical Supply Company will build a five-story concrete construction plant, 54x129 feet, on Rebecca street, North Side.

The Lawson Manufacturing Company, of Homestead, a suburb of Pittsburgh, has bought a site on the P. R. R. near Thomas Boulevard and will build a good sized plant this winter.

The Mineral Point Zinc Company has bought 60 acres of land at Tiltonville, Ohio, down the Ohio river, and will build a plant to cost over \$2,000,000.

The Pruet & Schaffer Chemical Company has bought 3½ acres of ground on Talbot street, West End, and will build a \$50,000 plant.

One of the most encouraging building projects that has turned up in Pittsburgh for a long while is that of the Marsh Company, of Washington, D. C., which will build 300 houses early in the spring in the Brighton Road section of the North Side.

Another interesting development in Pittsburgh building is the bill introduced in Congress a few days ago by Congressman Stephen G. Porter asking for an appropriation of \$4,000,000 for a federal

(Continued on page 33.)

"BERKELEY"
Hydrated
LIME



ASK YOUR
DEALER



"SECURITY"
PORTLAND
CEMENT

Security Cement & Lime Co.
Main Offices, Hagerstown, Md.

"AA" Means

"The Best That Can Be Made"

The reason that "CHICAGO AA" dealers continue to enjoy the largest share of the cement business in their respective territory, is due to the User who, during the past fifteen years, has had ample opportunity to acquaint himself with the superiority of this particular brand, and who uses it, in preference to all others.

Besides, we assist the dealer in marketing our product.

Write for full particulars
and prices today.

Chicago Portland
Cement Co.

30 No. La Salle St., Chicago



SALES OFFICE:
Liggett Bldg., St. Louis

THE
Standard
Brands

OF
Portland Cement

Lightest in Color
Highest Tensile Strength

ALWAYS, UNIFORM

Always the same high quality. Prompt shipment guaranteed at all times and made possible, as each mill is located within switching limits of the two greatest railroad centers of the West. You are assured of your orders being promptly filled.



SALES OFFICE:
Long Bldg., Kansas City

MANUFACTURED BY

Union Sand & Material Co.

ST. LOUIS
Liggett Bldg.

KANSAS CITY
Long Bldg.

MEMPHIS
Tenn. Trust Bldg.

WETHRPRUFE

Open
Mouth

We make these
bags in one-fifth
barrel size cheap
enough to use
and strong



Bates
Valve

enough to carry
seventy-six lbs.
cement to desti-
nation. A S K
FOR THEM.

WATERPROOF

An Extra Heavy, Extra Strong
WATERPROOF PAPER BAG
For Cement, Plaster, Lime, Etc.

West Jersey Bag Co.

Camden, N. J.

OTTAWA SILICA CO.

Ottawa, Ill.

Washed-Steam Dried and Screened

White Sand

Unexcelled for

Facing Concrete Blocks
Ornamental Concrete Stone
White Plaster
Roofing
Exterior Plastering
Sawing Stone and Marble, etc.

Analysis 99.90%

Prices, Freight Rates and Samples on Application

Shipped in Paper Lined Box
Cars or in 175-lb. Bags

You can order less than a carload, in fact shipments as small as five 175 lb. bags can be delivered economically.

LARGEST SHIPPERS OF WHITE SAND IN THE UNITED STATES

"Giant" Plaster Board



The HIGHEST GRADE Plaster Board made. Substitute for lath or wood sheathing. Impervious to heat or cold. Fire resisting. Vermin proof. Sound deadening. Does not buckle. Quick drying. Time saving. Size of board, 32"x36".

The "Giant" Plaster Board Co.
Bridgeport, Conn.

National Screen Separator



Will screen anything screenable.

Highest efficiency.

Guaranteed.

Write for Booklet to

National Engineering Co.
525 Monadnock Bldg.
CHICAGO

ROBERT W. HUNT JNO. J. CONE JAS. C. HALLSTED D. W. McNAUGHER

ROBERT W. HUNT & CO., ENGINEERS
INSPECTION CEMENT & REINFORCING STEEL
CHEMICAL AND PHYSICAL TESTING

Chicago
Montreal

New York
San Francisco

Office and Laboratories
Pittsburgh
Toronto

St. Louis
Mexico City

London
Seattle

Gravel Washing Plants



Correctly
Designed

Large or Small

For Maximum
Efficiency

JAMES B. SEAVERNS, M. E.
Peoples Gas Building, Chicago

THE SUMMIT SILICA CO.

BARBERTON, OHIO.

PRODUCTS: Steel Moulding Sand, Sand Blast Sand, Fire Sand, Core Sand, Concrete Material.

SHIPPING FACILITIES: Pennsylvania Lines, New York Central Lines, Baltimore & Ohio R. R., Erie R. R.

Our material is thoroughly washed and screened, insuring an absolutely uniform quality. Kiln dried by the very best process known in the sand business. Finest Equipped Mill and Best Material in the World.

NOTICE

All changes of copy where proof is desired must be in our office by the 12th of the month preceding issue for which it is intended. Where no proof is desired, copy must be in office by the 15th. Advertising forms close on the 19th and paper goes to press on the 22nd.

PORLTAND CEMENT LIME PLASTER
RICHARD K. MEADE, Mem. Am. Soc. Mech. Engrs.
Mem. Am. Inst. Chem. Engrs.
Chemical, Mechanical and Industrial Engineer

202 N. Calvert Street, Baltimore, Md.

Plans and Specifications for Improvement of Old Plants or Construction of New. Inspection, Tests and Analyses. Advice as to Improvement of Product or the Economic Operation of Plants. Reports on Properties and Raw Materials.

Buy Your Entire Equipment from One Concern—

from one set of drawings—built in one shop—keeping one set of records. The confusion resulting from any other practice is too well understood by those experienced in crushing and screening plant operation.

We carry this policy of "standardization" still further. All parts are reduced to the lowest possible number of sizes so that similar parts may be made interchangeable. This applies to sprockets, chain, buckets, screens, conveyor carriers, pulleys, shafting, and bearings. By consistently following out this policy, a great saving may be effected, not only in the number of repair parts necessarily kept on hand, but in the making of repairs, in the ordering of new parts, etc., and in making additions to the plant.

We maintain an engineering department thoroughly experienced in the design of gravel washing plants. We shall be glad to study your special conditions and make recommendations.

Stephens-Adamson Mfg. Co.

200 Ridgeway Ave., Dep't "F,"
AURORA, ILLINOIS

New York Chicago Pittsburgh St. Louis
Boston Los Angeles Vancouver

The Labor Saver keeps you posted on modern methods. It gives you live, up-to-date news of modern methods of handling material, many actual photographs from the field and brief, accurate descriptions. Data of value to the engineer regarding the "S-A" line of conveying machinery.

A request on your letterhead will bring you all issues without obligation.

250 "S-A" Gravel Washing Plants— All Successful

The plant illustrated below is one of many designed and built by us to meet special local conditions. Material is excavated by a steam shovel and delivered into a travelling hopper serving a 300-foot portable "S-A" Belt Conveyor. This, in turn, delivers to a 180-foot "S-A" Conveyor which elevates the material to the screens. Oversize, rejected by the first screen, is crushed and raised again to the main conveyor by a 98-foot "S-A" Belt Conveyor. Three sizes of gravel and one of sand are passed into the bins. Clean, high grade material is produced here at the lowest possible cost.

The plant is owned and operated by the Battjes Fuel and Building Material Co., Grand Rapids, Mich.



THE SCHAFER POIDOMETER

DESCRIPTION

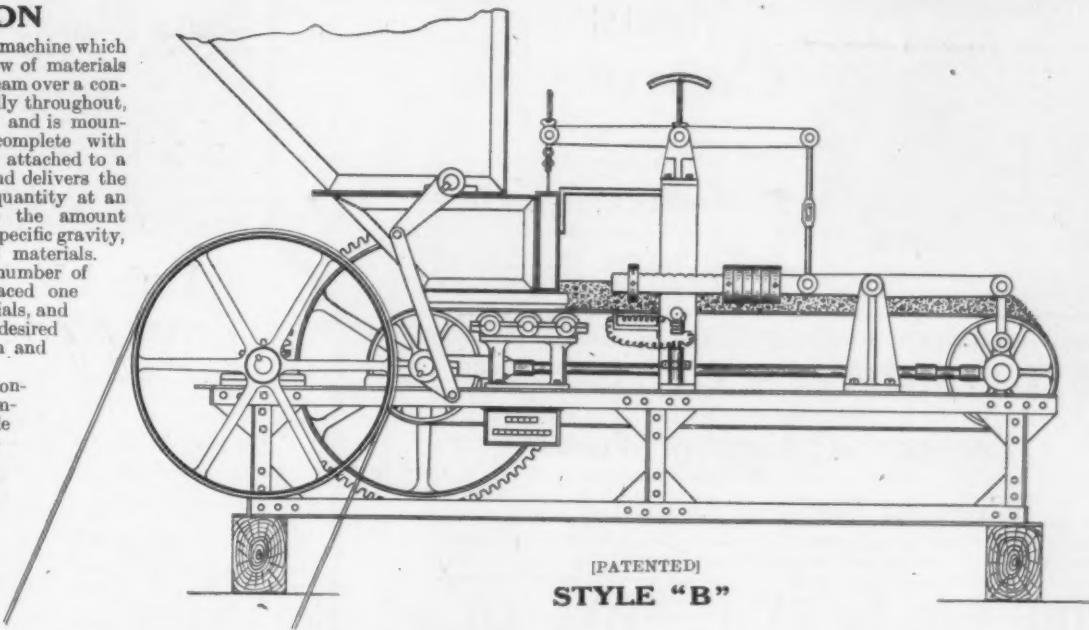
THE Schaffer Poidometer is a machine which weighs and regulates the flow of materials traveling in a continuous stream over a conveyor. It is built very substantially throughout, free from delicate working parts, and is mounted on a steel angle frame, complete with driving machinery. It can be attached to a hopper, bin or elevator spout, and delivers the material in any predetermined quantity at an even regular flow, and records the amount handled, regardless of changes in specific gravity, amount of moisture, or sizes of materials.

When it is desired to unite a number of different materials there is placed one machine for each of the materials, and each machine will deliver the desired proportions in a constant stream and insure an even mixture.

The machine is perfectly self-contained and can be set up immediately. It has a very wide range in capacity and can be readily adjusted, both for different quantities and also for a large variety of materials of different consistencies.

The wearing parts are limited in number and are of such a nature that they can be easily replaced. The poidometer is the result of many years of experiment with feeders and is proven practical device.

This is only one of the links in the chain of SEEKO SYSTEMS. A further inquiry will reveal interesting facts.



SEEKO SYSTEMS SECURE SUCCESS

THE SCHAFER ENGINEERING & EQUIPMENT COMPANY :: TIFFIN, OHIO

REXALL

Double-Stitched

BELTING



Five Reasons Why "Rexall" Is Economical for Conveying, Elevating, Heavy Drives

1. We use a 36 ounce hard woven duck base, **the heaviest ever used in belting.**
2. We use protected inner stitches, so that **the plies cannot open up.**
3. We use a laminated construction, so that **the bucket bolts and fasteners do not pull out.**
4. We use a filler not affected by heat and cold, so that **Rexall Belting keeps pliable and does not get hard.**
5. We use a double rounded edge construction, so that **Rexall Belting withstands edge abrasion.**

WHY NOT INVESTIGATE BEFORE YOU BUY THAT NEXT BELT?

IMPERIAL BELTING COMPANY, Chicago

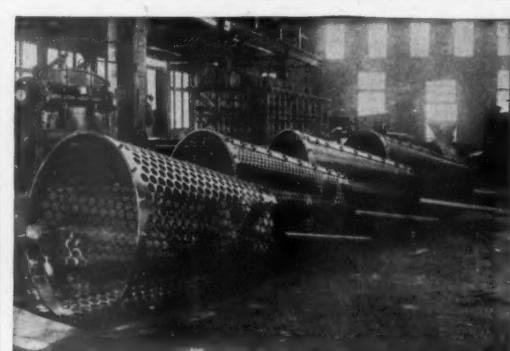
PERMANENT and THOROUGH
Water-proofing of Cement Work
results from the use of

**Maumee
Compound**

SPECIFICATIONS AND SAMPLES
ON REQUEST

The Maumee Chemical Co.
403 ST. CLAIR BUILDING
TOLEDO, O.

TRADE MARK.



Let Us Replace Your Worn Screens

or other portions of your plant which need overhauling and repair.

We can furnish you a new chain link, a new pillow block, a new conveyor roll, a new rope drive, a new set of screens or a new plant complete.

Of course, if you are to discard the old plant, or rebuild it entirely we would want you to make it a Webster Method Plant—using the Webster "Cyl-cone" Screen, which you have read about—or ought to—in our Catalog No. 38.

F. L. SMITH & CO. 50 Church St.
NEW YORK
SPECIALISTS IN
Engineering Cement Works
AND
Cement Making Machinery

THE FULLER ENGINEERING CO.
Designing, Constructing and Operating Engineers
ANALYTICAL CHEMISTS
Cement, Hydrated Lime and Gypsum Plants a Specialty
OFFICES: Allentown Natl. Bank Bldg. - - - ALLENTOWN, PA

The Webster M'f'g Company
TIFFIN, OHIO
CHICAGO, McCormick Bldg. (39) NEW YORK, 88-90 Reade St.

ROCK PRODUCTS

PITTSBURG RETAILERS.
(Continued from page 28.)

building and site in this city. The bill provides that the present federal building property shall be sold and also the postoffice site at Penn avenue and 16th street and Liberty avenue which the Government secured several years ago.

The Pittsburgh-Buffalo Company, with its affiliated interests, passed into the hands of receivers on Saturday, December 6, and Monday, December 8. This action was taken simply to protect the company's various interests and its creditors against the attacks which were being made on it by some big banking interests, which have endeavored for a long time to get control of the company's extremely valuable coal properties in western Pennsylvania and West Virginia. Builders' supply dealers all over this section will be extremely sorry to learn of the temporary embarrassment of the Jones' interests, which have been for many years among the largest and most satisfactory buyers of their goods.

The annual convention of the Retail Dealers' Association of Western Pennsylvania will be held in the Monongahela House in this city on Wednesday and Thursday, February 11 and 12. The committee appointed to make all necessary arrangements consists of President F. G. Lillo, of Oakdale, Pa., secretary H. V. S. Lord, of Pittsburgh; G. P. Textor, of Wilkinsburg, Pa.; George N. Glass and E. M. Hill, Pittsburgh, Pa., and C. P. Mayer, of Bridgeville, Pa. The banquet will be held the evening of February 12.

MEMPHIS RETAILERS.

Dealers in the Bluff City Have Had Plentiful Call for Materials—Building Material Men Form Local Organization.

Memphis, Tenn., Dec. 20.—As the New Year approaches the building supply men of Memphis express to ROCK PRODUCTS' correspondent the view that the year as a whole has seen a big development in Memphis on construction work, and that after the holiday period has passed, and perhaps a few weeks in January, that there will be a first-class spring activity.

There are a few lines of trade that have been stagnant during the latter part of November and December, but on the other hand some very large buildings have been under process of completion here, and other work is being outlined in a preliminary way.

A large amount of cotton on hand in the South is reassured and the commercial interests here have such a fine system of barter and exchange that, if it were really necessary, they could wait a month or two yet on the solons to sign the currency bill, though of course they would not care to do so.

Last Thursday evening the Memphis Building Material Men's Club held a "smoker" at the Business Men's Club and discussed matters pertaining to the local situation for the coming year. The discussions were of an informal character and the meeting was followed by a luncheon. In the absence of W. W. Fischer, president, P. A. Gates, vice-president, presided. This body was formed a few days ago and the membership is constituted of building material firms and their salesmen. Its objects are sociability and the promotion of better business conditions among the trade. L. J. Moss, of the Tri-State Builders' Supply Co., is treasurer. The membership committee consists of M. S. Samuels, chairman; J. C. Lovelace, Jno. J. Bishop, P. A. Gates and R. E. Montgomery.

A few days ago a number of architects of national prominence were here as the guests of the Architects' League of Memphis, stopping over on their way home from the meeting of the National Institute of Architects held in New Orleans. About twenty visitors were in the party. They were entertained at the Country Club and the Hotel Gayoso, were shown over the city and were given a view of the league exhibition which had been completed at the 19th Century Club building.

W. W. Fischer, of the Fischer Lime & Cement Co., is spending a few days in Chicago and other Northern cities.

J. C. Lovelace, of J. A. Denie & Sons Co., Front street, said today that he felt very optimistic about big work to be done in the future in Memphis. The city being half way between Chicago and New Orleans and the distributing point to the East and West, has prompted the Illinois Central railroad to provide for the expenditure of as much money at the Non-connah yards a few miles south of the city as they will spend on the eight-story passenger station now under erection at the foot of Main street. Mr. Lovelace said that while they had discontinued their lime kilns at Alabama, they were handling a great deal

here and also much plaster, having furnished the plaster for the Chisca Hotel, to be opened in a few days, and built by the C. B. Barker Construction Co. This is Acme Brand plaster. They also furnished 800-tons of the same product for the 15-story addition to the Bank of Commerce & Trust Co., nearly completed.

LOUISVILLE RETAILERS.

Falling Off in Demand for Materials Noted—Residences Mark Biggest Outlet.

Louisville, Ky., December 20.—Louisville members of the building trades are looking forward with interest to the coming convention of the National Building Trades and Employers' Association, which will be held here on January 20 and 21, largely on account of the probability of some definite action being taken with reference to the standardization of forms of contracts and specifications. This plan had its origin in Louisville, but has since been endorsed by a number of national organizations and has assumed a national scope. The American Institute of Architects, which had its convention in New Orleans early in December, appointed a committee to confer with a similar committee of the National Association of Building Exchanges, a rather new organization, on the subject, and it is expected that the result of the deliberations of the two committees will be available at the time of the convention in Louisville.

R. B. Tyler, president of the R. B. Tyler Company, which deals in brick and other building material, and which suffered the loss of its rock-crushing plant by fire several months ago, is interested in two other concerns which recently had fires that caused damage to the extent of about \$9,000. These were the Southern Asphaltolene Company and the R. B. Tyler Road Construction Company, whose stables caught fire from some unknown cause and were totally destroyed. The live stock in the building were saved by negro drivers living near by. The loss was partly covered by insurance.

Owen Tyler recently sold a quantity of Hy-Tex goldenrod matt brick for the Rudeman residence, on the Eastern Parkway in Louisville, this being one of the few fairly large jobs let recently. Deliveries have been about completed of Hy-Tex light red Bokhara brick on the Puritan apartments, at Fourth and Ormsby avenues. This building called for 125,000 brick.

The Standard Brick Company, of Mayfield, Ky., which is operated by X. B. Wickersham and his son, Ellis Wickersham, is in the nature of a side line to the cement, lime, wall plaster and general building material business conducted by the Messrs. Wickersham, although it has grown to such proportions as to loom rather larger than any other line of the business. Shipments are made to distant points, and the local demand is supplied by the plant as well.

ACTIVE DEMAND FOR RICKETSON MINERAL PAINTS.

The Ricketson Mineral Paint Works, manufacturers of mortar colors and dry ore paints at Milwaukee, Wis., are nearing the close of a very active season in which they have been exceedingly busy grinding out their high-grade mineral colors, which are becoming more and more in demand on account of their lasting and non-fading qualities.

The Ricketson company manufactures the famous "Red Brick Brand" mortar color which are considered by architects, contractors, building owners, dealers, etc., to be absolutely true in tone and insure in advance just the effect that had been planned on. The colors are permanent, by reason of the removal through a special process of all but the chemically stable oxides. Their great coloring strength and the exceeding fineness to which they are ground makes them go farther and mix easier than ordinary brands which, of course, is economy with a big "E."

The mortar colors are noted also because they do not fade. This latter quality is of special interest to the building owner because it insures him against disappointment through change of color and avoids the expense of doing the work all over again or else submitting to a job that is imperfect or unsatisfactory. It is claimed, too, that in the cost of maintenance of a building it actually adds strength to the brick mortar or concrete work in which they are employed by filling up the pores of the material.

The Ricketson Mineral Paint Works issues a little pamphlet under the title "Ricketson Reasoning" which is all that the term implies. Specifications are contained in the pamphlet showing how to mix "Red Brick Brand" colors. Whether used on brick surfaces or for cement and concrete

work any color desired may be had by the use of these mortar colors. Instances are cited where Ricketson mortar colors have stood the test of weather and exposure in finished work without a sign of crack or fading for more than 25 years.

A recent structure in which Ricketson "Red Brick Brand" mortar colors were used is the new Union Station at Washington, D. C., which is claimed to have the finest cement floors in the concourse in the world. They are also employed in the beautiful auditorium building at Milwaukee. At Washington, 100 barrels were used in tinting the cement floors and in Milwaukee a like quantity was consumed in the mortar joints.

INCREASED COST OF BUILDING IN ENGLAND.

America is not the only place in the world where the cost of building has taken on a decided increase in the last few years, says Construction News, if one may judge from the recent report upon the cost of erecting school buildings in that country by the elementary education subcommittee of the Lancashire education committee. This report shows that there has been an increase of about 10 per cent in most of the trades, and further increases are pending. In addition, the national insurance act is calculated to increase the cost of labor by from 2 per cent to 3½ per cent, the actual amount depending upon the circumstances under which the labor is carried out. The increased charges in connection with labor may be placed at about 12½ per cent. The subcommittee submitted the following statement as to the average per cent of increase in the cost of materials in the past two years:

Common bricks	14
Facing bricks	9
Glazed bricks	12
Lime	10
Portland cement	22
Rolled steel joists	23
Drain pipes, etc.	41½
Stone	10
Timber	30
General ironmongery	18
Slates	7½
Lead	30
Cast iron goods	60
Copper goods	20
Brasswork	23
Wrought iron piping	30
Glass	30
White lead	30

PATENT ROOFING IN SOUTH CHINA.

[Consul General George E. Anderson, Hongkong.]

There has been a notable increase in the use of prepared or patent felt and similar roofing in Hongkong in the past two years, especially in the past six months or so. The roofing problem in Hongkong and in tropical cities subject to similar conditions of extreme heat and dampness, with some cool dry weather in the so-called winter months, is a serious one. In spite of unusual allowance for the roofing of structures in Hongkong, there are few, if any, buildings in the colony which are thoroughly waterproof, and leaking roofs are common in all classes of houses. The ordinary roofing is of Chinese tile, whose joints are set in cement. There are also a considerable number of reinforced concrete roofs and roofs also of imported tiling.

In Hongkong there has also been continual trouble in having such roofs put on under dry conditions, and it has been found that when any material amount of moisture is imprisoned by such roofing it leads to immediate decomposition, apparently by the formation of gas. The gravel used for covering the felt roofing and the sand used in laying it are almost invariably salt-water gravel and sand, and apparently this also affects the roof chemically and leads to decomposition.

As against all these disadvantages there are advantages which are very material. In the first place a composition of patent roof laid in asphalt on a concrete roof is the most permanent roof now made in Hongkong. The tiling systems not only involve heavy expense for heavy timbers which must be replaced often, but also are actually ineffective against heavy rains and typhoon winds. That there is opportunity for the sale of such goods here is indicated by the growth of the business. It is becoming more and more evident that some change from the old type of tile roofing is necessary. At present patent roofing does not meet all local requirements, but it offers material improvement over past construction methods, and a composition roofing which will resist unfavorable conditions in this climate will unquestionably in time find a large sale.

LIME

THE NATIONAL LIME MANUFACTURERS' ASSOCIATION.

(Meets Semi-Annually.)
Officers.

President—Wm. E. Carson, Riverton, Va.
First Vice-President—J. King McLanahan, Hollidaysburg, Pa.

Second Vice-President—Lowell M. Palmer, Jr., New York, N. Y.

Third Vice-President—Geo. E. Nicholson, Manistique, Mich.

Secretary—Fred K. Irvine, Chicago, Ill.

Treasurer—C. W. S. Cobb, St. Louis, Mo.

Executive Committee.

Wm. E. Carson, Chas. Warner, L. Hitchcock, W. M. Hunkins.

NATIONAL LIME MEETING IN FEBRUARY.

President Carson Issues Annual Call—Coming Meeting Will Be Doubly Important to Members of Lime Industry.

To the Lime Manufacturers of the United States, greeting:

"The annual meeting of the National Lime Manufacturers' Association will be held February 4 and 5, 1914, at the Hotel Astor, Times Square, New York.

"It is useless for me to say anything further to those who have been attending these meetings, as the bare announcement is sufficient to bring them to attention.

"To those who do not think enough of the industry to join in helping develop it, and who are missing these annual educational lime feasts, let me say that it is time you were waking up. What is the use of being in a business and not being of it? Why are you letting these annual, two-day discussions go by without participating in them? Just think of the information you have missed this year, and every year just the same.

"The following is a list of bulletins issued by the National Lime Manufacturers' Association in 1913:

"Some Remarks on an Accurate Determination of Profits in the Lime Industry."

"The Crossland Kiln."

"The New Competition."

"Profit Sharing."

"Tests of Commercial Limes."

"Determination of Waste in Lump Lime."

"An Analysis of Financial and Industrial Conditions and Their Explanation."

"Hard Wall Plaster and Stone Plaster."

"Labor Saving in Building and Operating Modern Lime Kilns."

"A New Application to a Lime Kiln Producing Lime and Steam at a Minimum Cost."

"Stripping the Quarry."

"How the Lime Manufacturers Can Check the Inroads of Gypsum Plaster Has Made on Their Business."

"Silica Brick in Lime Kiln Linings."

"Getting Together."

"The Rotary Kiln for Lime Burning."

"Methods for Determining the Lime Requirements of Soil."

"Steel Crossties."

"The Use of Hydrated Lime in a Portland Cement Mortar."

"Preparation of a Chart to Show the Rate of Decomposition of Limestone."

"The crushing Strength of Lime Mortar."

"The Immigrant Laborer."

"Now then, it is better to get in line late than never; lay your plans to attend the annual meeting, and become a member of the association by sending Col. C. W. S. Cobb, treasurer, Syndicate building, St. Louis, Mo., \$25, which will pay your first year's dues (which are \$25 per annum), and come to New York prepared to hear the concentrated knowledge that has been collected on the subject you are interested in—lime, its standardization, its manufacturing problems, its selling prob-

lems—and if you have any plant or other troubles bring them with you, and I will assure you that out of the abundance of knowledge of the members of the National Lime Manufacturers' Association you will find some person who can give you a hint that will solve them.

"The object and intention of the National Lime Manufacturers' Association is to develop the lime business to a point where limestone properties will be as valuable as ore or cement properties. To do this, it is necessary that every manufacturer unite to raise the industry. This can alone be done through united effort. It was some time before it could be realized that the entire lime industry should move forward so that individuals might be successful. It is no longer possible for any individual plant to exploit or place before the public economically any particular proposition. It costs too much to do this, and to fight competition, so that it is enlightened selfishness for every lime manufacturer to put out his hand to help his brother manufacturer, as the rewards are four-fold in proportion to the service rendered.

"Don't fail to meet me on February 4th at the Hotel Astor, New York.

Faithfully yours,
WILLIAM E. CARSON,

President National Lime Mnfrs' Asso.

"P. S.—Watch ROCK PRODUCTS next month for copy of the program for the annual meeting."

* * * *

Regarding the proposed specifications for lime, as proposed by the lime committee before the American Society for Testing Materials, a full text of which was printed in the July issue of ROCK PRODUCTS, President Carson said in a recent communication:

"These specifications will be fully discussed at the annual meeting of the National Lime Manufacturers' Association, and recommendations modifying or amplifying them will be made and adopted.

"This is probably the most important question that has confronted the lime manufacturers of the United States as a whole, as it means the efforts of the National Lime Manufacturers' Association are successful in officially forcing the recognition of lime by the engineers and architects, as a cementitious and plastic material, and placing on record specifications that will govern the use and handling of the material in the future.

"I sincerely hope that every lime manufacturer in the United States will carefully read, analyze, and digest these specifications, and be prepared to present his views on this subject at the annual meeting, so that out of the abundance of knowledge the best possible specifications can be obtained."

LIME NEWS OF PITTSBURGH DISTRICT.

Pittsburgh, Pa., Dec. 20.—Agricultural lime concerns have all had a big year. Farmers have bought probably 50 per cent more lime for fertilizer this year than ever before. Nearly all makers of agricultural lime are preparing to have a bigger output next spring and the prospects now are very favorable for a big early spring business.

The Grove City Limestone Company, of Grove City, Pa., has been having a splendid trade all the year in lump burned lime and also hydrated lime for lawns and gardens.

The Tabler Lime & Stone Company, of Emmetsburg, Md., will pass into the hands of another corporation shortly, which is now being organized with a capital of \$35,000, according to report.

The Washington Building Lime Company, whose headquarters are at Buckeyetown, Md., has started work on a new lime plant at Woodville, Ohio, on the P. R. R., where it will make lump lime. At its Maryland plant it manufactures hydrated lime only.

The National Mortar & Supply Company is installing machinery in its new limestone plant at Gibsonburg, Ohio. It expects to have the big plant fully under way by January 10.

NEW YORK LIME CONDITIONS.

New York, N. Y., Dec. 20.—While there has been considerable complaint by the lime manufacturers as to the great falling off in demand in Greater New York, the manufacturers, especially those turning out high-grade finishing lime, have no cause to complain of the trade in New Jersey and eastern New York (outside of the metropolitan district). The demand in that territory has been excellent, the hydrate tonnage exceeding that of any year since hydrates have been on the market, which is remarkable when it is considered that building operations in the same section have not been normal.

A CORRECTION.

In our November issue, in the article "Specifications for Plastering," we referred to 12,000 pounds of sand to 440 pounds of hydrated lime for the scratch coat, and the same amount for 300 pounds of hydrated lime for second coat work. This was a typographical error in both instances. The amount of sand to be used is 1,200 pounds.

The La Garde Lime and Stone Works, Anniston, Ala., a few days ago sent a shipment of lime to Belgium in response to an order recently received. Manager Bernard L. McNulty seems determined upon a world-wide recognition of the product of that plant.



WHITEKOTE
HYDRATE
FINISH

THE
MOORES
LIME CO.
SPRINGFIELD
OHIO

IT'S ALL IN THE FINISH

WHITEKOTE THE RIGHT COAT



CEMENT

THE CEMENT MARKET.

It was to be expected that cement shipments would show a falling off in November, when compared with shipments of the same month a year ago, yet the difference is not as marked as the difference in October. Stocks at the mills are said not to be large and the manufacturers seem inclined to take the considerable falling off in business philosophically, feeling that the only thing they can do is to slacken up on the production end, until the demand resumes normal proportion. Prices are holding firm with the dealer buying only for his immediate requirement.

From the present outlook, there will be fewer speculative contracts made between the manufacturer and the dealer during January and February than are usually entered into at that season of the year. Several reasons can be taken into consideration. (1) An increasing tendency on the part of the dealer to make his purchases in a conservative way. (2) The small amount of local construction work in sight and the fact that the manufacturer has learned by experience that the most satisfactory selling is on the thirty-day proposition.

GREATEST CEMENT REGION IN THE WORLD.

The Lehigh cement district of eastern Pennsylvania, with a few plants in New Jersey, is the most important cement-making region in the world. As a whole the Lehigh district makes nearly one-third of the cement produced in the United States. The production of cement in Pennsylvania in 1911 was 27,024,725 barrels, valued at \$19,306,349, against 27,625,340 barrels, valued at \$18,945,835, in 1912. Pennsylvania is by far the leading State in the production of cement, with approximately one-third of the total output of the country.

STANDARD PORTLAND HIGHLY SUCCESSFUL.

The Standard Portland Cement Co., operating a great plant at Leeds, in the Birmingham district, is now closing the most successful year in its history. There has been a steady demand all the year for its high-grade product, and every barrel of cement made at the plant this year will be sold. As a matter of fact, shipments from the plant were stopped for three days, a few days ago, in order to allow a little stock to accumulate.

The Standard Portland Cement Co. is now making a half-million barrels of cement a year. Its plant has

been enlarged repeatedly until now the capacity is five times what it was at first. Another enlargement is planned for the early spring and then the output will be just seven times the original production.

Standard Portland Cement has been used in numbers of notable contracts in the Southeast during the past year. The Alabama Power Co. is now using this cement by the ten of thousands of barrels. The big Goat Rock dam on the Chattahoochee river near Columbus was built with Standard Portland cement, as was the \$200,000 Dillingham street bridge at Columbus.

J. I. McCants, sales manager of the Standard Portland Cement Co., gave an optimistic report on the year just closing, as well as the outlook for 1914, when seen by a ROCK PRODUCTS representative. Mr. McCants has been in charge of the sales department of this company since 1908, and the repeated enlargement of the plant, made necessary by increasing orders, shows how successful his department has been.

NEW BAG CLEANER ON THE MARKET.

The Century Cement Machine Company, of Rochester, N. Y., has recently placed on the market a machine for cleaning cement sacks which is claimed to be an efficient and economical method with a minimum amount of dust. The Century bag cleaner is simple in its construction and is quite a small affair. It does not take up much floor space, requires no power to operate and can be handled by a child. The bags are counted and a bell notifies the operator after 50 bags have been cleaned, thus enabling him to tie and tag the sacks. The Century machine is substantially constructed with a durable iron base. The outside covering is of heavy sheet steel and the interior works are made of high-grade steel which cannot be worn out. Owing to the simplicity of the mechanism and the small number of parts to the machine there is small likelihood of it getting out of order and delaying the work. It is ready to use every instant and is not in the way when not in use. The Century Cement Machine Company has made careful compilations and figures that the annual loss by reason of cement adhering to the sacks amounts to approximately \$300,000; and this, together with the desire to provide a more economical means of cleaning sacks, is what invoked their attention towards the manufacture of the patent bag cleaner.

William Smith, foreman at Plant No. 3 of the Atlas Portland Cement Company, at Northampton, Pa., was seriously hurt when a section of pipe of an air line on which he was repairing burst. He was struck on the head with such force by a piece of the flange end of the pipe that he was rendered unconscious for a time. Scott Seiger, who was assisting Mr. Smith, received minor injuries.

LOUISVILLE CEMENT NEWS.

Low Call Prompts Temporary Shutdowns—Clinchfield Company Increases Output.

Louisville, Ky., December 20.—The call for cement has simmered down to what might be termed the irreducible minimum in this part of the country just now. There are exceedingly few large jobs on, still fewer in sight, and comparatively little going on in the way of small work calling for cement. Plants in this vicinity are either running on short time or preparing to close down until spring and the resumption of work.

The cement mills of J. B. Speed Company, at Speed's, Ind., and the company's lime works at Milltown, Ind., will be closed down, beginning December 23, for a period of about sixty days, for a general overhauling of the machinery, which is an annual necessity. The demand for lime is excellent at this time, and the company is also making deliveries of cement on the J. H. Cahill Beargrass creek job, which will take between 15,000 and 20,000 barrels. The company has ample reserve stocks of both products, however, and the shutdown will not affect its ability to make deliveries as required. T. A. Courtney, sales manager of the company, attended the quarterly meeting of the Association of Portland Cement Manufacturers, held in New York on December 8 and 9.

The plant of the Kosmos Portland Cement Company, at Kosmosdale, Ky., is running on a reduced output since the winter season began in earnest and work has slowed down in consequence. Most of the cement now being manufactured is for stock, and it is possible that a short shutdown will be made later in the season. There are few big contracts in sight at present, and none are looked for before the opening of the spring season.

Lime is the most active line with the Union Cement & Lime Company just now, according to Secretary F. A. Sampson, this product being used more generally than ever before in the treatment of "sour" land. There is very little cement moving.

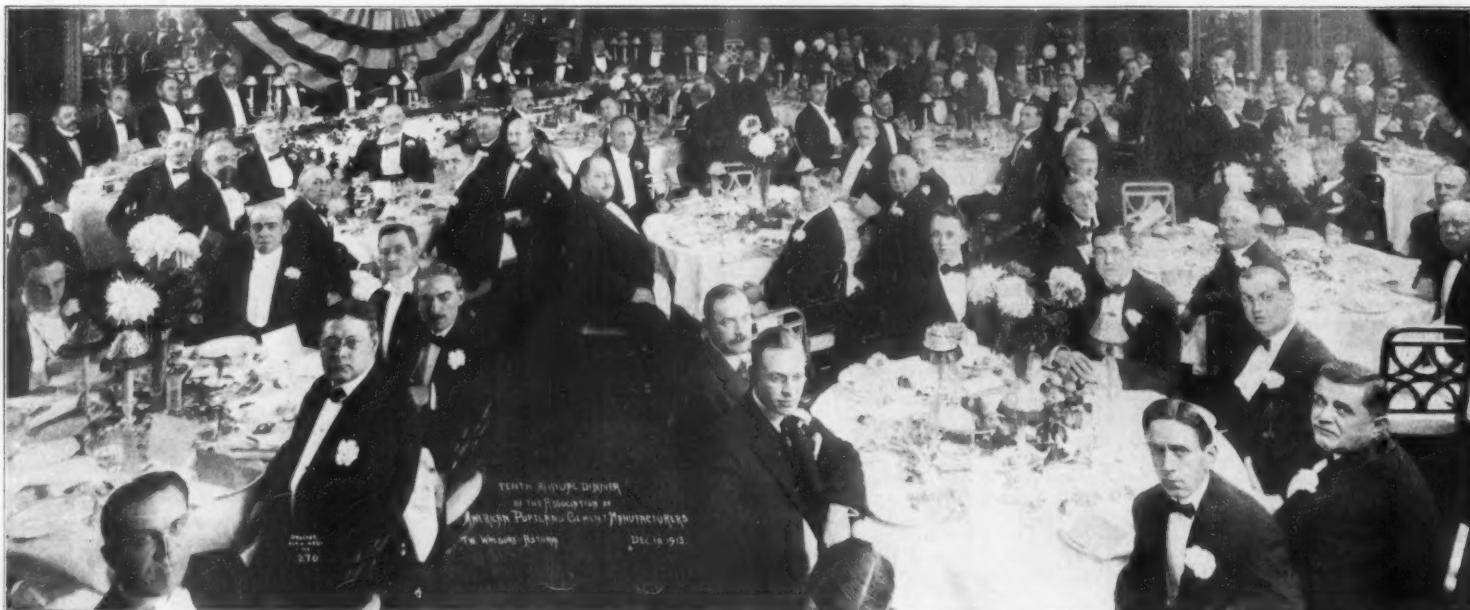
It is reported that the Clinchfield Portland Cement Company, of Kingsport, Tenn., will increase its monthly capacity from 60,000 to 100,000 barrels. Details regarding the increase are not yet available for publication, but it is practically certain that the expansion will be made.

The big concrete machine shop of the Coplay Cement Manufacturing Company, located at the company's plant at Coplay, Pa., was practically destroyed by a fire of undetermined origin on December 8, entailing a loss of \$40,000. The blaze was first sighted by employees of the plant, who immediately sounded an alarm, but by that time the fire had gained considerable headway. An announcement has been made that the burned structure will be rebuilt within the immediate future.



Our artist has depicted above in the jocular vein a potent condition which obtains in the various cement-handling agencies, and one that is strikingly inimical to good practice. The era of economy carried to the minutest detail is upon us. The cement sack is a useful container, which requires expensive machinery and considerable skill in its manufacture, and possession of it is attended by the

changing hands of real, good money—CASH MONEY. Then why, in the name of righteousness and sensible procedure, should it not receive CAREFUL handling by those with whom it comes in contact? We all know who is to blame—Mr. Pure Cussedness—and some stringent measures ought to be adopted to remove the lurking dangers which beset the itinerary of the cement sack; for truly its career is one of sadness and heartbreaking experiences.



ANNUAL DINNER OF ASSOCIATION OF AMERICAN PORTLAND CEMENT MANUFACTURERS, AT WALDORF ASTORIA HOTEL, NEW YORK, N. Y., DECEMBER 10.

CEMENT MANUFACTURERS MEET

Association's Work of the Past Year Reviewed by a Representative Attendance
—Interest Manifested Throughout the Different Sessions
Indicated a Profitable Spirit of Harmony.

The annual meeting of the American Portland Cement Manufacturers was held at the Waldorf-Astoria Hotel, New York City, on December 8-9-10-11. The attendance was very large, consisting of the chief executive officers of all of the cement companies, together with the members of the sales departments and with quite a sprinkling of the technical staffs of the great cement organizations.

Monday and Tuesday were largely devoted to the committee meetings discussing the topics which have become the standing work for the attention and development of the society. A business meeting was held on December 10th, when the routine matters of the organization were disposed of and the following officers elected:

John B. Lober, president of the Vulcanite Portland Cement Company, was re-elected president.

R. S. Sinclair, of the Alsen's American Portland Cement Works, was elected vice-president.

L. Conn, of the Giant Portland Cement Company, was elected treasurer.

The splendid development work of the secretary's office and promotional establishment in Philadelphia received the hearty endorsement of every member of the association, as well as all of its officials. Percy H. Wilson, secretary of the association, and Lewis R. Ferguson, assistant secretary, with the able staff with which they have surrounded themselves have achieved very gratifying and practical results in the enlarged use of cement on the farm and in the direction of road improvements, as was brought out over and over again in the matters that came up before the various meetings, as well as in the corollary conversation during the convention occasion.

The annual dinner was served at 7 p. m. Wednesday, December 10, Mr. Sinclair acting as toastmaster. The dinner was a very enjoyable affair, punctuated by pleasantries from the irrepressible and always to the point George S. Bartlett, who is one of the favorite sons of the cement industry. The dinner lasted till long past midnight and it was a genuine conclave of good fellowship, for there has been through the year 1913 a more satisfactory condition in cement than in any previous year, perhaps. Everybody being well satisfied with the results of the season just closing and with quite a little encouragement to look forward to the coming year, the feeling of confidence was apparent on every countenance.

In the remarks of John R. Moron, president of the Atlas Portland Cement Company, the best sketch of the occasion was set forth. He spoke informally and following his remarks closely they were about as follows:

The subject which your President allotted to me

is "The Future of the Cement Industry." It is too complicated a subject for any individual or group to properly treat. I have prepared no set speech, but will talk for a few moments extemporaneously, just as though he had given me the subject of the future of our sons.

Statistics and figures are not of as great importance as character; a knowledge of one's self and the control of one's self on the part of the boy, and a knowledge of the industry and a knowledge of economics on the part of the manufacturer, and the resisting of temptation by both.

The knowledge of the industry means a knowledge primarily and fundamentally of the cost of production, not alone that which is called "mill cost," but added to this mill cost the equally important factors which make what might be known as actual or commercial cost. Of these factors referred to, depreciation and depletion should be substantially taken into consideration, depreciation because of the particularly destructive character of our manufacturing, and depletion for the reason that I know of no other industry of importance where no cost is figured for raw material, except that of the labor involved in getting it to the mill. The fact that this raw material will last during your lifetime and mine, in no way affects the soundness of setting aside a reasonable amount of money for depletion, as is done when coal is taken from the mine, or a sinking fund set aside to pay a mortgage or bond which may become due after your life or mine.

When the manufacturer finds this actual cost, then he can judge what his minimum average selling price must be in order to make a reasonable return to his shareholders or owners. A reasonable return in our business should show a substantial profit per barrel. A plant manufacturing a million barrels per year will conservatively cost a million and one-half dollars to build and operate. If the maximum output of this plant is sold each year, the gross selling price averaged for the last two years, would be approximately \$750,000, therefore, a profit of say 20 per cent on sales would only be a return of 10 per cent upon the actual money invested. This 10 per cent would but meagerly compensate an investor for the risk which he would take in the business, and you must remember that these figures are based upon an entirely successful operation and distribution of maximum output.

And now to the knowledge of economics. The science of economy which affects all business affects ours specifically. They are the same principles which we studied and find in Adam Smith's "Wealth of Nations": The law of supply and demand. Let us look at demand first. Our industry

is unique in that for the last 13 years each year has produced and consumed more product than the preceding year, this in spite of good or bad times. From an output of approximate eight or nine million barrels in 1900 it has reached ten times that amount during the year just ending. Such a demand should warrant good results in operation and income, if properly handled.

When I first came into this business it seemed to me that the thermometer was artificial; that a concern was judged by its output rather than its income; that too much attention was paid to the number of barrels produced, instead of to the amount of net earnings from operation.

The general science of economics means the applying of the law of supply to demand. Supply is more easily regulated than demand, the application, however, in order to be successful, must mean an application to the industry as a whole, so that the burden may be more or less evenly distributed. It would not be according to any successful general law to have a mill, large or small, operate the maximum capacity at the expense of its neighbors and competitors who were hewing more nearly to the natural laws of supply and demand as affecting general conditions, and, from my point of view, no manufacturer can expect to successfully follow this policy for any great length of time.

And now as to resisting temptation: Bad trade methods and customs are easily started and hard to remedy. It is often a temptation on the part of distributors to make exceptions which soon become rules. It is a temptation to too quickly decide the proper relationship of the dealer to the manufacturer; this matter should be carefully considered, so that the dealer may be amply paid for the service which he renders. I think we should all resist the temptation of desiring to arbitrarily dictate policies and create personal antagonism and the retaliation which usually follows.

Nineteen hundred and thirteen has been a reasonably good year. My personal opinion is, in spite of general business conservatism and in some instances depression, that the year 1914 will consume as many barrels of Portland cement as 1913, this because of the new usages of large magnitude just in the growing period, such as good roads and concrete work on the farms.

My hope is that each of you will have a Happy and Prosperous New Year.

Some of the posies of wit, as well as the floral decorations, lasted till daylight.

On Thursday, December 11, was the open meeting devoted to the discussion of the development of concrete roads. C. J. Bennett, Connecticut state highway commissioner, by invitation, addressed the convention. Mr. Bennett is an experienced road builder and expressed himself as very much gratified with the results of concrete road construction which has been done under his supervision in the state of Connecticut. He told of the splendid co-operation which was given his efforts by the secretary's office in which Messrs. Wilson and Ferguson gave their personal attention to the beginning of the operation, leaving Mr. Hilde of the secretary's staff on the job to assist in carrying out the details of the specifications. The speaker declared that the

unqualified success of the work from the first in Connecticut was due largely to the intelligent and persistent assistance received in this way. He stated his opinion that all failures of concrete road construction have been due to lack of care in the selection of aggregate materials as well as the actual work on the road itself. He gave the figures as deduced from actual construction in Connecticut as follows: "Standard gravel concrete road construction, 68 cents per square yard; standard trap rock concrete road construction, 89 cents per square yard." These figures he compared with the old standard macadam specifications which have been in use in the state of Connecticut for a number of years and which costs an average of 65 cents per square yard. Mr. Bennett drew attention to the slight difference of three cents per square yard for gravel concrete or twenty-four cents a square yard for trap rock concrete, as being cheaper than the trap rock macadam road, when quality was taken into consideration. He announced that it was his intention to advocate the construction of concrete roads exclusively for future road improvements. Mr. Hilee, of the technical staff of the secretary's office, being present, President Lobert took occasion to cap the complimentary remarks by Mr. Bennett calling on him to tell of the work on the Connecticut roads from his viewpoint. Mr. Hilee told of some of the usual troublesome details of getting a big concrete job started, about the mixture that wouldn't mix, and the teams that wouldn't haul, etc. He said that they have found a mixture of 1 to 4 for the gravel concrete to be the best available in the Connecticut specifications. They had used tar paper joints in most of the work and in some cases had used the Baker iron joints, but the Trus-Con iron joints had been used more extensively and with great satisfaction.

R. W. Lesley presented a paper, being the translation of the "Transactions of the German Portland Cement Manufacturers' Association," with copious notes by Mr. Lesley.

The German cement manufacturers acknowledge the pleasant entertainment which they had enjoyed while their representatives were visiting the mills in this country. The idea developed that the German manufacturers now regard the American product and methods of manufacture fully equal to their own, if not superior in some respects.

The ever present package problem came up for the usual amount of discussion.

SAN FRANCISCO CEMENT NEWS.

San Francisco, Dec. 10.—While the cement trade is seasonably dull, the California manufacturers have disposed of a comparatively large output during the year, and with a still larger demand in prospect for 1914 a number of improvements are being made. The Cowell Portland Cement Company is opening an upper quarry for its lime rock at the Mount Diablo works, and is figuring on a new tramway, steam shovel, etc. The Pacific Portland Cement Company is making some improvements at its Mountain Quarries plant, where a new locomotive has been put in service.

The Old Mission Portland Cement Company will hold a meeting on February 6 to consider increasing the bonded indebtedness.

Work on the construction of the Beaver Portland Cement Company's half-million dollar plant at Gold Hill, Oregon, was recently begun by the Hunt Engineering & Construction Company, of Kansas City, Leigh Hunt, of that concern, having arrived to begin the supervision of the erection of the plant. He will spend the next few days laying out the preliminary work. The buildings will all have concrete foundations and will be constructed with corrugated iron, to be replaced later with concrete structures after the plant begins the manufacture of cement. The majority of the machinery has been purchased.

The Thomas Millen Co., Portland cement manufacturers, Jamesville, N. Y. have broken ground for their new cement stockhouse and expect to be able to run cement into the same before Feb. 1st, 1914. The building will be of steel and concrete with self-emptying bins. At one end will be located a pack house equipped with Bates-Valve sacking machines. This will be the first of extensive additions to be made to the plant in the next year. Owing to the high quality of the product and the consequent popularity of the brand in Syracuse, Rochester and northern central New York, the company has found the enlargement of their plant necessary. Richard K. Meade, chemical, mechanical and industrial engineer, 202 N. Calvert street, Baltimore, Md., has been retained as engineer and prepared the plans and specifications for the new stock house.



USES OF BAUXITE.

The chief uses of bauxite are given in the last report of the U. S. Geological Survey as follows: As raw material in the production of metallic aluminium; in the manufacture of aluminium salts; in the manufacture of bauxite bricks; in the manufacture of alundum (fused alumina) for use as an abrasive. The use of bauxite in the manufacture of calcium aluminate to give a quick set to plaster compositions should be added, as well as the extended use which alundum is finding in the refractory industries. The use of bauxite in the production of metallic aluminium is by far the most important. Only the purer bauxite is used in the manufacture of chemicals, such as alum, aluminium sulphate, and aluminium salts in general. Freedom from oxide of iron is essential in the material to be used in the chemical manufactures. The use of bauxite in the manufacture of bauxite brick for furnace linings has long been considered. It has been found by experiment that when the impure forms containing considerable iron oxide are exposed to intense heat the bauxite is converted into a solid mass of emery of such extreme hardness that it can barely be cut by steel tools, and that it resists chemical, thermal, and mechanical action to a marked degree. The purer the bauxite used the more refractory it is, and the addition of bauxite free from iron oxide to refractory clays increases their alumina contents and at the same time their refractoriness. The high cost of the raw material, however, as well as of the manufacture of the bricks, makes the ultimate cost of bauxite brick high compared with the cost of silica or fireclay brick. Recent applications of bauxite in brick are in the lining of rotary cement kilns, lead-refining furnaces, and basic open-hearth steel furnaces, where a brick high in alumina and low in silica is required. Recent tests seem to show that bauxite bricks are suitable for basic open-hearth furnaces, provided they can be made with less than 12 per cent silica; and experiments show that bricks with this low proportion of silica are as good as magnesite bricks. A brick 9 by 2½ by 4½ inches weighs 7½ lbs. and stands a crushing test of 10,000 lbs. per square inch.

Bauxite is used on a large scale in the manufacture of the artificial abrasive, alundum, at Niagara Falls. This abrasive is made in the electric furnace by fusing calcined bauxite. It is high in crystalline aluminium oxide, and virtually amounts to a form of artificial corundum. Its quality is under complete control, and hence it can be duplicated with ease in the various abrasive products, a factor of great importance in any successful abrasive industry. Alundum is particularly efficient in the grinding of steel.

CABOT'S PLASTER BOND DAMPROOFING.

Samuel Cabot, Inc., manufacturers of plaster bond damprooing for direct plastering on brick, concrete, terra cotta, or wood, and their product bearing the trade name of Cabot's Plasterbond Damprooing has met with a success which makes it one of the leading reliable damprooing materials. The problem of damp-course waterproofing to provide for the direct application of plaster on brick, concrete and other surfaces without intervening furring and lath has been made to appear complex and bewildering by the variety of products and grades, the numerous and wondrous titles that they bear and the involved and semi-magical methods and processes of application. But when this intoxicating atmosphere is dispelled it becomes a simple scientific problem to be solved by a compound that is waterproof, insoluble and adhesive and is chemically inert, so that it will not deteriorate with age. Such is the most easily conceived explanation of the success of Cabot's Plasterbond Damprooing.

Two requirements fulfilled with this product are the formation of a perfect and permanent bond between the wall to which it is applied and the interior plaster which it is applied over, and its formation of a moisture proof sheet or dam that prevents the penetration of dampness through to the plaster.

These two things are accomplished by making a compound which penetrates deeply into the pores of the concrete, terra cotta, or brick wall, and yet

leaves the surface in an adhesive and "tacky" condition, so that when the plaster is laid over it the damprooing is sucked deeply into its pores by the strong capillary attraction created by the drying out of the plaster.

Every ingredient in Cabot's damprooing is in a fluid state and penetrates and completely fills the voids in bricks, concrete, and by capillary force is drawn into the pores and voids in the plaster. It is a scientific product and neither haphazard nor mysterious. It makes furring and lathing unnecessary and the company claims this primarily saves space, makes larger rooms in a given ground area, and further saves time by permitting interiors to be finished at once without waiting for the carpenter to furr and lath, thus saving the material and labor of this operation.

Its use on brick, cement or terra cotta walls, inside or outside, for damprooing and bonding of plaster; on metal beams or other metal, or wood surfaces, to bond the plaster without lathing; on interior surfaces where damprooing without plastering is required, has been the extent of its successful application.

"Cabot's Mortar Colors," another product of the same company, is worthy of equal attention through the fact that these colors are in pulp form. The company believes that pulp colors cost much less to mix and are much more certain to give uniform color throughout the mortar. Mortar color is one of the smallest items of expense in a building, yet its influence upon the appearance of a building is very great. A raw, uncolored mortar joint or faded-out color lends an air of neglect which approaches the slovenly, while a clean, rich and harmoniously colored joint gives a trim and tasty finished touch to the building that has a value quite out of proportion to its cost. The pulp colors not only save a great deal in the labor of mixing, it is claimed, but the resulting color is much more brilliant and even. The pulp colors manufactured by Samuel Cabot, Inc., have met with extensive success during the past year.

BUYS ANOTHER PLANT.

Louisville, Ky., December 17.—The property comprising the plant of the bankrupt Southern Wall Plaster Company, consisting of its real property, plant and other improvements, but not including a number of teams and wagons, and other equipment, was purchased by the Kentucky Wall Plaster Company for a lump sum which has not been made public. The teams and other property not comprised in the plant were sold separately. The new owner of the plant has not as yet operated it, but will overhaul it and begin operations in the spring, if business warrants. Things are rather quiet in the plaster business in Louisville at present, on account of the slowness of building operations, a condition which cannot be expected to improve for several months, during which time the operation of a second plaster plant, in addition to the Kentucky Wall Plaster Company's original plant, would hardly be good policy.

A CORRECTION.

In a recent issue of Rock Products, in reporting the demise of Charles C. Calkins, we credited Mr. Calkins as being engaged with his brother, H. W. Calkins, in the Toronto Plaster Company. This statement was in error, as Mr. Calkins was the Buffalo representative of J. B. King & Company, manufacturers of the famous King's Windsor cement and dry mortar, King's Diamond and Hillsboro brands of calcined plaster and King's plaster board. Mr. Calkins had been the Buffalo manager of J. B. King & Company since the establishment of the Buffalo branch, some fifteen years ago.

NEW PLASTER BOARD.

Southern Gypsum Company, Inc., with a plant at North Holston, Virginia, has put on the market a plaster board which takes the place of lath and first coat plaster. It is known as "Economy" plaster board. It was recently used in the Fulton county court house at Atlanta, one of the finest public buildings of its kind in the South.

PLASTER PLANT BURNS.

The plant of the Rock Plaster Company at 150th street and the East River, New York, N. Y., was destroyed by fire December 14, with a loss of \$500,000. The company's plant occupied three frame buildings and covered nearly an acre of ground. Several explosions in the burning buildings added to the danger and the spectacular nature of the blaze.



NATIONAL ASSOCIATION OF SAND AND GRAVEL PRODUCERS.

(Meets Annually.)

Officers.

President—F. W. Renwick, Chicago Gravel Company, 343 South Dearborn street, Chicago, Ill.

First Vice-President—H. H. Halliday, Halliday Sand Company, Cairo, Ill.

Second Vice-President—W. F. Bradley, Ohio & Michigan Sand & Gravel Company, Toledo, Ohio.

Third Vice-President—H. F. Curtis, Lyman Sand Company, Omaha, Neb.

Fourth Vice-President—Lee R. Witty, Wabash Sand & Gravel Company, Terre Haute, Ind.

Fifth Vice-President—J. J. Neary, Utica Fire Sand Company, Utica, Ill.

Treasurer—C. H. Brand, Atwood-Davis Sand Company, Chicago, Ill.

MODERN GRAVEL-WASHING PLANT ATTRACTS NATIONAL ATTENTION.

One of the most frequently visited gravel washing plants constructed this year is the Fisher Sand & Gravel Company plant at Beloit, Wisconsin. Hardly a day passed this summer without at least one interested visitor, and during some days as many as six would call to see this plant operate. The reason for the interest shown is the excellent results, together with the low cost of production and the lack of shutdowns on account of well-designed and constructed machinery.

The plant was designed to handle 25 to 30 cars of material, but we are informed by the owners that as many as 40 cars of material have been shipped per day of 10 hours. The Raymond W. Dull Company, of Chicago, Ill., furnished all the machinery except the excavator and they also engineered and superintended the construction of the plant. This is a very good reason why the plant has made good, for we have heard some excellent reports from different parts of the country about the Dull company and the wonderfully good plants which they are erecting. We understand that some of their screens have been in use for the third season without having a penny spent for repairs or a minute's time lost in the operation of the screens.

One of the most interesting features of the Fisher Sand & Gravel Co.'s plant is the method of delivering the material from the excavator to the plant. This is done by the Dull Sectional Field Conveyor. This conveyor is built in 16-foot sections, or a series of sleds with runners placed crosswise. This form of construction enables the shifting of the conveyor sidewise in a quick and easy manner and also permits of a continuous flow of material to the plant. It is this constant flow

of material to the plant which results in the large capacity. The constant flow also insures better screening efficiency.

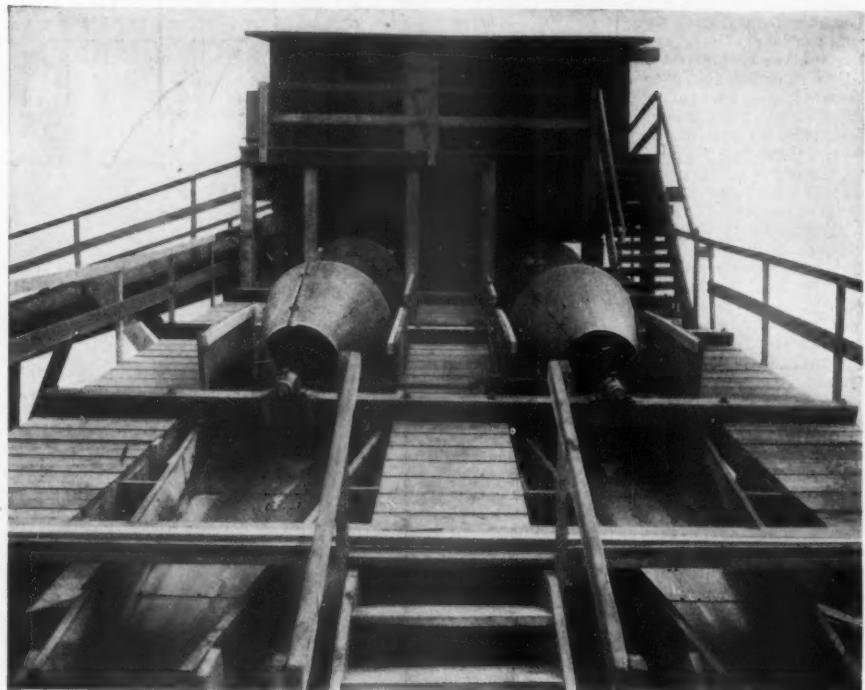
The first section of the field conveyor is shown in Fig. 1 (D24), although we understand that the owners have extended the conveyor farther into the pit since the photograph was taken. The field conveyor radiates about a delivery point or pit from which it is carried up the inclined conveyor into the crusher house, where the oversize stone is screened from the aggregate and crushed by an Austin No. 5 gyratory crusher.

After this preliminary work is done the material is elevated by the main conveyor to the top of the plant and passes through the two rows of Dull's Inclined Conical Washing Screens. There are three screens in each row, making three sizes of gravel. The sand and muddy water then pass into a Dull Sand Separator, which completes the washing process.

The plant is electrically driven throughout and requires only a few men to operate it. Loading tracks are on both sides of the bins and ample track storage is provided.

Fig. 2 shows the side elevation of the plant and illustrates the arrangement of the main conveyor, which has a 24-inch belt. To show how economical the plant is for power, the superintendent states that for ordinary service the readings for power show as low as 60 to 70 horse power to operate the plant, although the motors are ample to take twice that amount. The plant is built in a very substantial manner and shows careful study in its design.

The combined production of sand and gravel in Pennsylvania in 1911 of 5,689,059 short tons, valued at \$3,025,267, increased to 6,509,333 short tons, valued at \$3,371,513 in 1912.



SCREEN ARRANGEMENT—FISHER SAND & GRAVEL CO., BELOIT, WIS.

The Riddle Sand and Gravel Company, Birmingham, Ala., has been incorporated with a capital stock of \$12,000. Officers: B. J. Riddle, Jr., president; J. P. Walker, vice-president, and J. Lewis Underwood, secretary and treasurer.

The Portage Silica Company, of Youngstown, Ohio, has issued a four-page pamphlet which gives a few points about silica road pebble for wearing surface on brick, concrete or macadam roads when used with a good bituminous binder.

The Wisconsin railroad commission has ordered the Chicago, Milwaukee & St. Paul Railway Company to refund to the Southern Wisconsin Sand & Gravel Company, of Janesville, Wis., \$3,827.07 over-charges on shipments of gravel and sand to various points in the state.

The Greenville Gravel Company, of Darke County, has bought the Cheney Cut gravel pit, a mile and a half west of Mechanicsburg, Ohio, from the Big Four and will establish a stone-crushing plant there. About thirty men will be employed. Joseph Copick is the manager.

The Fisher Sand and Gravel Company, Janesville, Wis., has increased its capital stock from \$30,000 to \$70,000, according to an amendment to the articles of incorporation recently filed. The stock is divided into 300 shares of common stock and 400 shares of preferred.

The Pine Bluff Sand and Gravel Company, of Pine Bluff, Ark., was chartered with a capital of \$10,000, of which \$2,000 has been subscribed, to dredge the Arkansas River for sand and gravel. The officers are J. O. Evatt, president; M. E. Miller, vice-president, and W. P. McGeorge, secretary-treasurer.

Shipments are now being made from the new molding sand pits located on the Maxfield farm, just north of Janesville, Wis. Those who are interested in the proposition include: Judge H. L. Maxfield, Alva Maxfield, Mrs. Sophia and Miss Julia B. Maxfield and Drs. J. F. Pember and T. W. Nuzum. The sand has been thoroughly tested and is pronounced to be of high quality.

The Dr. Henry Bainter farm of fifty acres near Dresden was bought recently by W. H. Adams, of Zanesville, Ohio, for \$7,500 and Mr. Adams will install a gravel plant on the site immediately. He announced that within a short time the plant would give employment to twenty-five or thirty men. The farm has thirty acres of gravel. Mr. Adams has one gravel bank at Gilbert, and this new concession will more than double his output.



PLANT OF FISHER SAND & GRAVEL CO., BELOIT, WIS.

MODEL WASHING PLANT OF THE INDIANA OLIS GRAVEL AND SAND COMPANY.

Near Indianapolis, Ind., there has recently been erected an up-to-date gravel washing plant possessing several interesting features. The plant has been operating most successfully throughout the present season, delivering on the average 1,200 yards of high-grade washed sand and gravel per day.

The property being worked covers about 70 acres, most of which lies on a large hill 20 to 110 feet above the plant level. Excavations are being made by means of a 70-ton Marion-Osgood shovel, and these are carried to the plant in 35-yard hopper cars drawn by a 25-ton locomotive.

The service track leads up over a concrete track hopper, constructed twenty feet above the foundation line and having a capacity of 60 yards. Gravel is withdrawn from the bottom of this hopper through an "S-A" quadrant gate onto an "S-A" belt conveyor, which leads on an incline up to the top of the plant. This conveyor is 240 feet between centers equipped with style No. 9-C troughing carriers and a 30-inch "S-A" oiled and stitched canvas conveyor belt. It is driven by means of an individual 50-horsepower motor located at the head end of the conveyor.

An automatic gravity take-up located directly back of the head pulley takes up all the slack of the belt as fast as it accumulates. This method of providing an even, uniform tension has been mentioned before in the Labor Saver and is a relatively new development. During this past year it has been applied to a number of similar situations with considerable success. In principle, it consists essentially of a weighted pulley mounted in a frame which hangs loosely between two vertical guides. Two idler pulleys in line with the return carriers of the conveyor lead the belt to this take-up pulley, the weight of which hanging on the belt gives the desired tension.

Eight "S-A" Improved Gilbert screens, arranged in two series of four each, separate the gravel in the usual manner of operation, rejecting to the bins below. The stream of gravel from the conveyor belt is divided and delivered to two chutes, slightly inclined, in each of which a stream of water washes the gravel into the small end of the screen. As the material works back toward the large end of the screen, it encounters a severe stream of water, which thoroughly washes the material and forces the undersize through the screen at a rapid rate of screening. The oversize from the first screens is rejected to the bins, while the undersize is washed by a stream of water into the second pair of screens and the operation repeated. The last screen of each series discharges into an "S-A" settling tank, which separates the sand from the clay and loam in the washing water. In this tank, the water entering is thrown against a baffle plate and the sand immediately settles to the bottom, while the water containing the dirt in solution flows off at the top in a continuous stream. When sufficient sand accumulates, the weight of the tank automatically opens a valve and the sand drops below to the bin. In this plant, four settling tanks are used, two in each series. The first tank on each side takes out the coarse sand and the overflow is allowed to pass to the second tank, which acts in the same way to secure the finer sand.

The perforations of the screens and the two settling tanks on either side allow the following sizes to pass to the bins: That passing 2½-inch rings, 1½, ¾ and ½-inch rings, and coarse and fine sand. There is a small proportion of larger stones mixed

with the 2½-inch size and arrangements have been made to later install a crusher and the necessary conveyors to pass this again through the plant.

The bins, which also serve as the supporting structure, are of cribbed construction and have a capacity of 600 yards. Sixteen 24-inch "S-A" quadrant gates control the flow to cars on the tracks, which extend for 2,000 feet on either side of the plant.

The washing water is delivered to the screens by means of a 6-inch centrifugal pump, driven by a 50-horsepower motor. Additional storage is provided in piles near the plant served by a 25-ton McMyler locomotive crane. This crane operates on a track paralleling the loading tracks and unloads from the cars to the piles or reclaims in the same manner to the cars. This plant was designed by the J. C. Buckbee Co., engineers, of Chicago, and the conveying and screening machinery was manufactured by the Stephens-Adamson Manufacturing Co.

NEW GRAVEL PLANT.

Jackson Gravel Company to Operate 72-Acre Gravel Bed Near Ackerson Lake.

The Jackson Gravel Company, of Jackson, Mich., will have in operation next spring its plant at its gravel beds located in the vicinity of Ackerson Lake, the company having purchased a mound of gravel at this point embracing seventy-two acres, with a supply sufficient to keep the plant in operation from thirty to fifty years. Its product will be washed and unwashed gravel, sand and crushed rock, a crusher being installed to handle the boulders which always are found in such deposits, and for nine months a year there will be an output of fifteen cars daily.

The plant will be operated by electric power. When the operations are begun next spring there will be an investment of \$30,000. The process will represent all the latest methods of economical handling of material and will be practically automatic in operation, cables and gravity being freely used. The output may be doubled if certain contracts are received which are being considered.

The Jackson Gravel Company is an off-shoot of the Greenville Gravel Company, of Greenville, Ohio, a concern which has been in operation for eleven years. It has three plants in operation at that point and one at Springfield, Ohio, all of which is the outgrowth of an insignificant beginning. R. T. Humphrey, formerly of Greenville, Ohio, will manage the Jackson (Mich.) plant and will make his home in that city.

AN ACTIVE PACIFIC COAST COMPANY SPECIALIZES IN SAND AND GRAVEL.

San Francisco, Dec. 10.—The Pratt Building Material Company, "Examiner" building, San Francisco, while doing a general building material business is giving special attention to its sand and gravel department, in which quite a lot of equipment is used. In addition to a gravel pit at Austin Creek, Cal., the company has two boats, equipped with pumps and screens, by which river sand and gravel is pumped from the bottom, washed and graded, and loaded on barges for shipment to various points about the Bay. A specialty is made of furnishing mixtures for concrete work to construction jobs. One of the principal recent contracts in this line was for the J. G. White Engineering Corporation, which is building two wireless stations for the Marconi Company, one at Bolinas Bay and the other at Tomales Bay, on the coast just north of San Francisco. Each of these stations will cost

\$250,000, and in the construction the Pratt Building Material Company's washed gravel (finest sand to rock 1½-in.) was used. Other materials furnished by this company for the same job include reinforcing steel, sewer pipe, building paper, drain tile, lime, roofing, common, pressed and fire brick, fire clay and mortar stain. The Pratt Company is also furnishing washed gravel for two big warehouses at Oleum, Cal., and pressed brick, hollow tile and gravel for a local apartment house.

PITTSBURGH SAND AND GRAVEL NEWS.

Operators in Pittsburgh District Have Had Busy Year—Much New Equipment Has Been Added.

Pittsburgh, Pa., Dec. 20.—Pittsburgh sand companies report some gain in business over 1912. This was due largely to the big municipal improvements and big building projects in the downtown section. Those concerns who got in on this business have had a very satisfactory year. All the river sand companies have been reasonably busy and most of them are still working at 75 to 90 per cent capacity, although they expect to lay off shortly. Most of the sand companies have added to their equipment this year and are better prepared now to do a large business than ever before. The glass sand companies and also those concerns which furnish foundry sand report much more prosperity than in 1912. Glass factories are running steadily and taking regular and large shipments of sand this winter.

The Iron City Sand Company announces that although business started late last spring the total for the year is slightly above that of last year. There is comparatively little big business in sight for this winter, its officials say. This company is having built by the Dravosburg Dock Company at Dravosburg, Pa., the largest sand dipper in the United States. The boat will be 160 x 35 feet and will have a capacity of 3,000 cubic yards every 24 hours.

The Winfield Sand & Mineral Company, whose offices are in the Second National Bank building, announces that it will run its plant at Winfield, Butler county, Pa., full time all winter. It is enabled to do this because it is a mining operation and the company has plenty of storage room for its product.

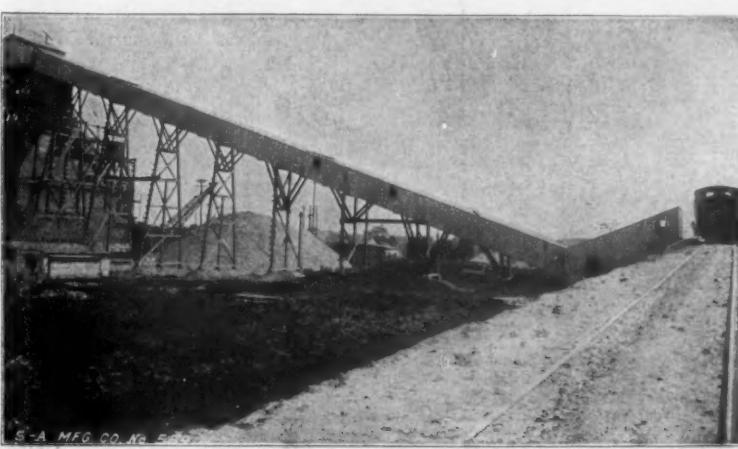
The Summitt Sand & Gravel Company has been organized at Akron, O., by Francis Seiberling and others of the Rubber City. It will operate a plant near that city.

W. H. Adams, Zanesville, Ohio, has bought the Bainter farm of 50 acres near Dresden, Ohio, and will install a graveling plant at once, to employ about 30 men. He already has another good graveling bank operating at Gilbert, Ohio, in the same district.

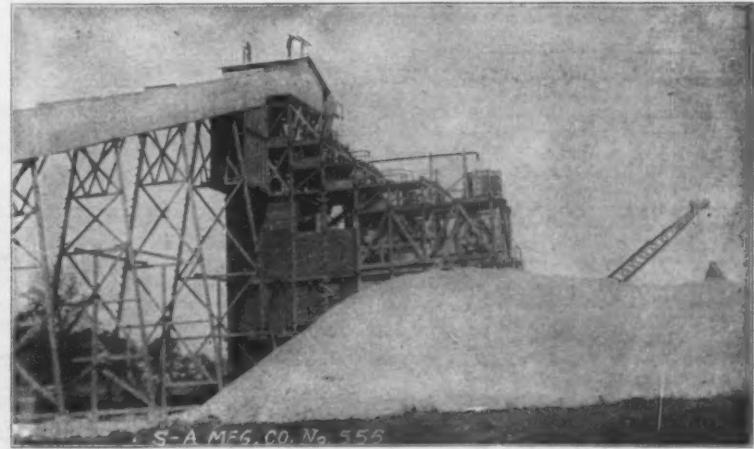
The Pennsylvania Sand Company has filed a deed of assignment for the benefit of its creditors at New Castle, Pa. Attorney W. J. Uber of this place is named as assignee. The company's plant is located along the Western Allegheny Railroad near Cascade Park. It is reported that the assignment will probably be only temporary and that operations will be resumed shortly after the first of the year.

The Rosenberg Gravel Company, Rosenberg, Texas, which is operating on the Brazos River two miles east of Houston, and which was damaged to a considerable extent in a recent storm, has been repaired.

The new plant of the Mid-Continent Sand Company, Roff, Okla., has commenced operations with a capacity of 200 tons of sand per day.



SHOWING THE TRACK HOPPER AND THE CONVEYOR LEADING UP THE PLANT.



PLANT OF THE INDIANAPOLIS GRAVEL & SAND CO.

CONCRETE

AMERICAN CONCRETE INSTITUTE.

(Meets Annually.)

Officers.

President—Richard L. Humphrey, Philadelphia, Pa.

Vice-President for two years—Arthur N. Talbot, Urbana, Ill.

Vice-President for one year—L. C. Wason, Boston, Mass.

Treasurer—H. C. Turner, New York, N. Y.

Secretary—Edw. E. Krauss, Philadelphia, Pa.

CALGARY ADOPTS INDUSTRIAL IDEA.

Six-story Concrete Factory to Be Erected by City.

Calgary is the first city in Canada to undertake as a municipal department the construction and operation of an industrial service building. For the \$250,000 appropriated by the large favorable vote of the ratepayers a six-story concrete structure will be erected and leased to incoming manufacturers.

It is anticipated that by getting a start in this way small industries will be encouraged, soon outgrow their temporary quarters and go out to build more extensive accommodations for themselves. The

advantage primarily to the newcomer is that he retains his capital in the form in which he can most profitably use it. To the people at large this plan offers an inducement to small manufacturers which, instead of being a tax, as is the bonus idea, is a revenue producer from the beginning.

The industrial bureau of Calgary is responsible for having pressed the question before the attention of the city council and ratepayers.

CONCRETE PAVING ECONOMICAL.

George W. Tillson, president of the Borough of Brooklyn, city of New York, has compiled an interesting table on the various qualities of pavements, such as cheapness, durability, ease of cleaning, resistance to traffic, non-slipperiness, ease of maintenance, favorableness to travel and sanitarness.

In this table concrete meets the quality of cheapness easily. Mr. Tillson used figures from 141 cities, and in these the average cost of the concrete, some of the statements including grading, curb and gutter work, was \$1.31 per square yard. The cost of good concrete is said to have ranged from \$1 to \$1.50 per square yard.

In durability, concrete again stands well, and from the figures it is deducted that concrete when properly laid, will give satisfactory service of from 10 to 20 years.

THE LINCOLN HIGHWAY.

The Lincoln Highway is one of the greatest movements for civic improvement that this country has experienced in its history. There are thousands of people scattered over the United States who are enthusiastically supporting this Lincoln Highway project because of their patriotic desire to commemorate the memory of the immortal Lincoln. The marked enthusiasm shown in this movement has never been equalled in any similar enterprise that

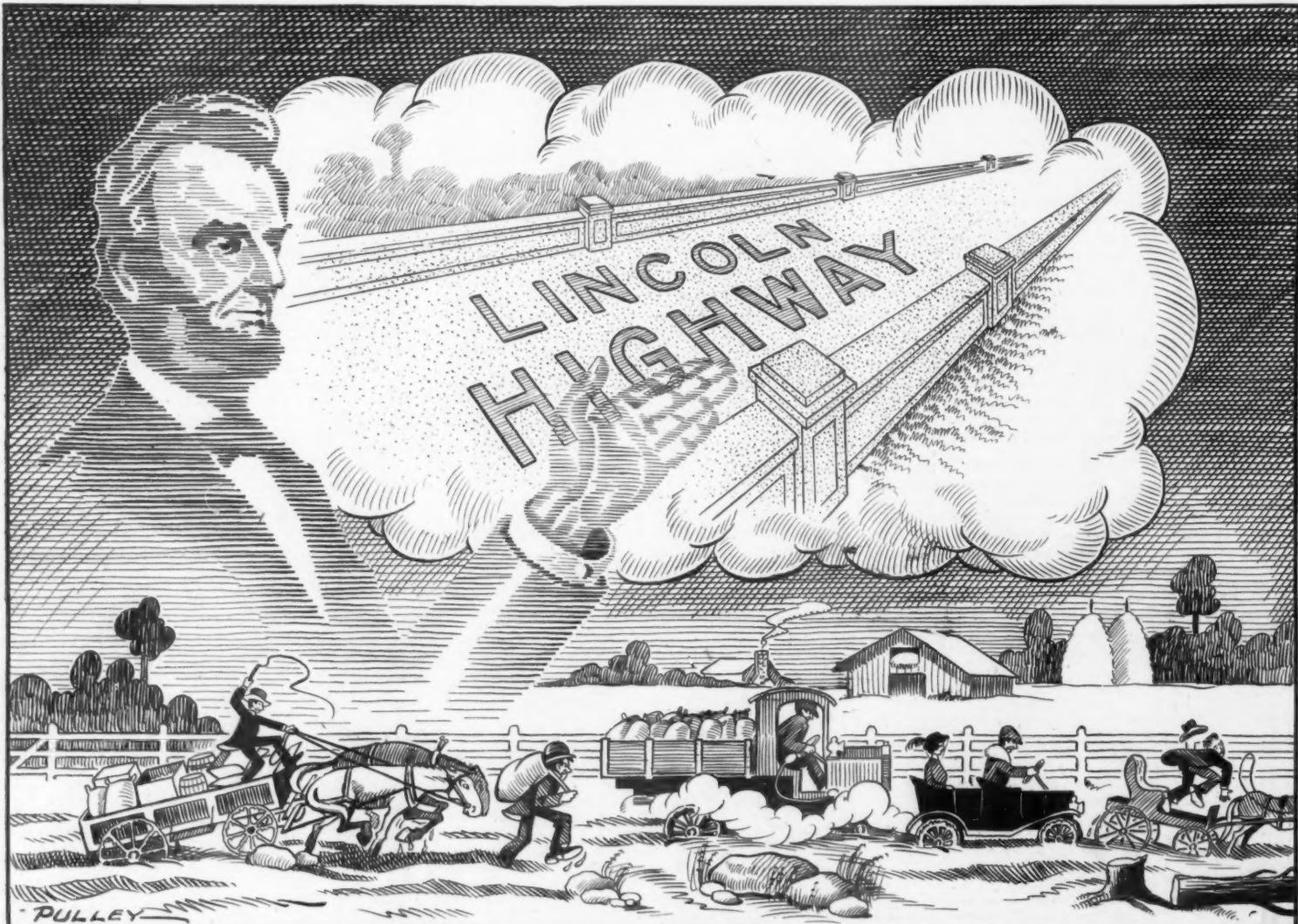
has been launched in my lifetime and it is going to have a most stimulating effect upon the development of the wagon roads throughout the entire country. This highway, once constructed, will be an example that will be imitated by other sections of the country, and as each link in the road is added new impetus will be given to the movement until eventually every section of the United States will be covered with a magnificent system of good roads.

CONCRETE ACTIVITIES IN SAN FRANCISCO.

San Francisco, Dec. 10.—In view of the splendid wharves built in San Francisco during the last few years, considerable protest has been aroused by the announcement that the wharves now being planned would be built of creosoted wooden piles. The matter has now been taken up by the Cement Workers' union, which has the backing of the Building Trades Council, and considerable pressure is being brought to bear in favor of permanent construction.

One of the largest concrete building contracts recently let was for concrete work and fireproofing in the new San Francisco city hall, the job being taken by the Clinton Fireproofing Company at \$189,250. Figures are again being taken for crushing brick from the foundations of the old city hall, for use in concrete work in the new building. The general construction contract for the municipal auditorium, to adjoin the city hall, has been taken by Lindgren & Co., at \$717,014. Quite a lot of concrete work will be involved in the construction of the main court of honor of the Exposition, about a \$300,000 job, for which figures are being taken. The San Francisco Artificial Stone Paving Company has taken a contract for concrete work in the First Congregational Church, at \$31,000.

The Culley Cement Block Co., Louisville, Ky., will establish a branch plant, and has already purchased the building for same.



ANOTHER EMANCIPATION.

ROCK PRODUCTS

MID-WEST CEMENT SHOW.

Exhibition at Omaha and Convention of Nebraska Users Will Be Mammoth Events.

Cement in every phase will have its inning during the Mid-West Cement Show which will be held in Omaha in conjunction with the annual convention of the Nebraska Cement Users' Association, January 30-31 and February 2-4, 1914.

The Omaha show is distinctly a Nebraska institution. It is officered by Nebraska men who have had the hearty co-operation of Omaha business men through the Bureau of Publicity. But its great success lies in the efforts of the men who have worked year after year to develop it to a point where it would be a recognized institution.

The 1914 show is assured. With 20 per cent more space available through a rearrangement of the mammoth Auditorium, more than 70 per cent of the space has been sold, with inquiries coming in daily.

"We have made many changes and improvements in the arrangements," says Secretary Whipperman, "and as this has been a prosperous year for the middle West, especially in cement work, we will have the best and most representative attendance in the history of the organization. This will be the only show held, save the Chicago show, this year. Dates have been arranged so that an exhibitor at the Omaha show will have one week to get to Chicago and arrange for his opening there."

The Nebraska Cement Users' Association will hold its annual convention in Omaha during the show, the convention opening February 2 for a three-days' session. Peter Palmer, of Oakland, Nebraska, president of the association, has framed a program which includes many national authorities on cement and its uses. Sessions of the convention will be held in the morning only, thereby permitting the members to attend the show in the afternoon and evening.

Omaha, where the show and convention will be held, is the metropolis of Nebraska and of the Missouri river valley, and its growth reads not unlike a fairy tale, so remarkable is its advancement. Its expansion and that of the show are synonymous. However, cold facts and figures for the past ten years reflect one of the most substantial enlargements enjoyed by any city. Omaha has a population of approximately 160,000 and is a city of intense commercial activity and beautiful homes, with all the appurtenances which are necessary to make life worth while.

EXHIBITION OF ARTISTIC AND USEFUL CONCRETE PRODUCTS.

At a recent fall festival in Oskaloosa, Iowa, a number of attractive displays were made at Exhibit Hall, one of the most interesting being that of the Carlon Construction Company. It repre-



EXHIBIT OF CARLON CONSTRUCTION CO., OSKALOOSA, IOWA, AT OSKALOOSA FALL FESTIVAL.

sented pieces of lawn furniture, tables, chairs, urns, duplication of old tree stumps covered with bark, etc., all of which was done in cement. The illustration on this page will furnish enlightenment as to the splendid quality of these reproductions and the highly artistic arrangement of the display. The Carlon Company also included in this display broken ashlar work, the Interlocking Cement Stave Silo, cement burial vaults, and other things. George H. Carlon is president of the Carlon Construction Company and is assisted by his son, Harry. The business was established 30 years ago. The company management is of the progressive type, the Carlons keeping right up to date

in matters relative to cement work by visiting all the cement exhibits held in this country, whether far or near.

PHILADELPHIA CONCRETE NEWS.

General Situation Featured by Great Amount of New Work in Sight.

Philadelphia, Pa., Dec. 20.—Concrete interests in Philadelphia and vicinity have been enjoying what has generally been termed ideal weather conditions considering the time of the year, and the local builders and contractors have continued active in the erection of concrete structures and have been able to complete this work on various other structures started earlier in the season. Should these present open conditions continue the present activities along this line will be carried on for some time to come.

The Turner Concrete Company, 1713 Sansom street, has been awarded a contract for the erection of a concrete, steel and brick building to be erected at Twenty-fifth street and Allegheny avenue, 70 by 110 feet.

Plans have been completed and bids are being received by Ballinger & Perrot, architects, 1211 Arch street, for a four-story concrete and brick wedge furnace building to be erected for Harrison Bros. & Co., Thirty-fifth street and Gray's Ferry road.

Stuckert & Sloan, Crozier building, 1420 Chestnut street, have taken sub-bids on a three-story reinforced concrete restaurant building to be erected at 1432-34 South Penn square for John Speese. Building to be occupied when completed by Horn & Hardart Baking Company. Award to be announced in the near future.

A. K. Bugee, 206 East Hanover street, Trenton, N. J., has completed plans and specifications for a one-story concrete and brick factory building, 85 by 750 feet, to be erected at Camden, N. J., for A. Mecky & Co., 1705 Allegheny avenue, Philadelphia. Ready for bids by January 1, 1914.

Richard A. Kerns, Jr., Coatesville, Pa., is preparing plans and specifications for a two-story steel and concrete factory building to be erected in Downingtown, Pa., for the Rowe Motor Manufacturing Company, each building to be 65 by 145 feet, ready for bids about January 4, 1914.

The George Kessler Contracting Company, Drexel building, has submitted the lowest bid for the erection of a two-story concrete and brick stable to be erected at Third and Everitt streets, Camden, N. J.

George H. Thirsk has been awarded the contract for the erection of a two-story reinforced concrete and brick factory building, 58.4 by 104 feet, at Adams and Leiper streets, at a cost of \$8,000.

H. W. Geshwind was recently awarded the contract for the concrete work to be done for the Girard Theater Company, at 625 West Girard avenue.

The Franklin Construction Company, of Philadelphia, has been awarded the contract for the construction of extensive concrete river bulkheads at the naval home in this city, by the Government.

A. L. Carhart, Hale building, has been awarded the contract for the construction of a concrete tunnel, 16 by 60 feet, to be erected at Tulpehocken Station, Chestnut Hill branch of the Pennsylvania Railroad.

Plans have been completed for the construction of a reinforced concrete bridge to be erected over Newton Creek, between Merrick and Lake View avenues, by County Engineer, Camden, N. J.

William Hunter, chief engineer of the Philadelphia & Reading Railroad, has prepared plans and specifications and is about ready for bids on a reinforced concrete bridge at Greenwood avenue, Hopewell, N. J.

PITTSBURGH CONCRETE NEWS.

Irwin & Witherow make this encouraging report: "If we could go ahead with 50 per cent of the work we have in the office we would do twice as much business in 1914 as in any other year in our history. We attribute the apathy of builders in letting contracts at present almost entirely to the very tight money market."

The Dravo Contracting Company has the contract for building two concrete retaining walls at 34th and Carson streets, South Side, for the Monongahela division of the P. R. R. They will cost about \$20,000.

On the North Side the John F. Casey Company is making rapid progress on the concrete foundation for the \$600,000 freight station of the P. R. R. This will be 500 feet long and 40 feet wide and will have 72,000 square feet of floor space with five new tracks elevated and running alongside the building.

LOUISVILLE CONCRETE NEWS.

Advent of Winter Brings Cessation of Activities—Workers Winding Up Season of Normal Business—Extensive Work Held Up for Spring Completion.

Louisville, Ky., December 10.—Smaller concrete work is about at a standstill as a result of the lateness of the season, although there is still a little work going on.

B. H. Arterburn, president of the Standard Concrete Products Company, stated recently that while big work has been very scarce, there has been plenty of small stuff to keep the company's forces busy. A concrete garage at Jackson and Broadway, costing \$1,400, was one of the jobs recently handled by the company. The triangular concrete fence posts which have for some time been one of the Standard's specialties, have moved well, although they have not been pushed actively of late.

Thomas Nolan, a Louisville architect, is preparing plans for a new building to take the place of the Church of St. Paul, which was recently destroyed by fire. The new building will cost about \$20,000 and will have concrete foundations.

Edward P. Wolf, secretary and treasurer of the Western Concrete Construction Company, stated recently that poured work has been very light during the season, and that the year as a whole has not been up to the average. Blocks have been in fairly good demand, as they have almost entirely taken the place of brick in the foundations of low-priced houses; but this has not been sufficient to bring up the total volume of business to what could have been desired.

The Stoeser Concrete Construction & Supply Company, which has been for some time located at Versailles, Ky., where it has been engaged in the erection of concrete silos and other work, has moved to Lexington, Ky., where it will establish permanent offices. The company is composed of A. J. Stoeber, of Chicago, and H. J. Z'Barron, of St. Louis. The company recently received a contract for a considerable quantity of sidewalk work in Lexington, at 14 $\frac{1}{2}$ cents a square foot, F. T. Justice & Co. receiving other sidewalk contracts at the same time.

The Central Construction Company has been awarded the contract for the construction of concrete sidewalks on both sides of Bolivar street, in Lexington, from Broadway to Upper. The city is doing a good deal of this kind of work and the company in question, as well as several others, has handled a number of contracts.

B. F. Granger, of New York, representing the Lock-Joint Pipe Company, was in Lexington recently conferring with the city commissioners with reference to the use of his company's reinforced concrete pipe for sewer work in that city.

Work has been started by the J. H. Cahill Company on one of the largest concrete jobs of the year, that of completing the straightening of Beargrass creek in its course through the city. The job will cost about \$360,000, and calls for the placing of about 15,000 cubic yards of concrete, a considerable amount of excavation being necessary. Very little will be accomplished, however, during the winter, unless the weather continues unusually mild.

The Henry Bickel Company recently landed the contracts for the construction of one of the big main sewers in the West End of Louisville to drain a large section of the city, the contract price being \$178,000. A large part of the sewer will be of monolithic concrete construction, the main being about ten feet in diameter, while the remainder, ranging in size from 54 to 18 inches, will be of reinforced concrete pipe, made on the job by the Lock Joint Pipe Company.

The American Concrete Construction Company has decided to quit work for the season, "while the quitting is good," as Secretary F. W. Graham put it. The company is holding over about \$15,000 worth of work to start on next spring, however. It was simply considered inadvisable to take any chances with bad weather, as the work is none of it pressing.

Sam Robertson, one of the best-known concrete men in Louisville, is finishing up several big jobs while the weather continues mild, among them being 30,000 square feet of concrete flooring at the Union Warehouse Company, and the construction of an all-concrete engine house for the city, with special floors, costing \$20,000. Mr. Robertson desires neither to hold over work until spring nor to handle it during bad weather, which accounts for his haste. Also, he must go to Frankfort on January 6 as one of Louisville's legislative representatives, and as he will probably be there for at least two months, he did not want to leave any more loose ends hanging there were unavoidable.

SAND-LIME BRICK ASSOCIATION CONVENTION

Annual Meeting Held at Harrisburg, Pa., on December 9 and 10, Marks Another Year of Advancement in the Industry—The Convention a Success from Every Viewpoint.

The tenth annual convention of the Sand-Lime Brick Association was held at Harrisburg, Pa., on December 9-10. The attendance was fairly representative of the industry from all sections of the United States and Canada. The prevailing feeling of the meeting was one of confidence and satisfaction in the steady growth of popularity of the standard sand-lime brick in all the markets, where it has become the favorite material for a very wide range of building specifications. The reports from the various districts indicate a growing prosperity among the members of the Sand-Lime Brick Association, which has become a veritable brotherhood by reason of the many meetings which have been personally held in one another's company.

The tenth annual convention, held at Harrisburg, which is the city home of the Hummelstown Brownstone Company, whose works are located at Waltonville, Pa., a thriving industrial village not far from Harrisburg. The Messrs. Walton, of the Hummelstown Brownstone Company, together with President Goho, surrounded the delegates with what they call old-fashioned Pennsylvania hospitality, which is just about the top notch, insofar as the writer is a judge of such things.

Delegates Visit Hummelstown Plant.

On Tuesday morning the convention was called to order by President Goho and the routine matters of the association disposed of, and at 1 p. m. the delegates adjourned in a body to visit the extensive plant of the Hummelstown Brownstone Company at Waltonville. The plant is a combined crushing,



GENERAL VIEW OF CRUSHER AND BRICK PLANT.

purposes throughout the country. The crushing plant was designed for the purpose of working up and making marketable the offal from the dimension stone quarrying operation, and the high quality silica sand is in turn a by-product of the crushing operation. It was at this point that the particular interest of the visitors was directed, for with the production of sand the first step in the production of sand-lime brick begins with securing the sand or silica element of the brick as absolutely free from moisture as possible when it enters the plant. To obtain this all wet material takes one course, while dry material takes another. All of the wet material is dumped into a pit at the crusher, from which it is elevated and dropped into a rotary dryer using direct heat. The wet sand and crushed rock pass through the dryer, the stone falling into one of the American Clay Machinery Company's nine-foot dry pans, and here it is ground to sand and elevated to a screen which is made of four-mesh wire cloth. The tailings from the screen return by chute to the dry pan, while the sand is passed through a secondary dryer which is heated by steam and located directly over the sand storage bin. The dry material is dumped into a No. 5 Austin crusher, which breaks it down and empties it into an elevator, where it is passed through a rotary screen, where all material smaller than $\frac{1}{4}$ inch is taken out. The balance is assorted into various sizes up to two inches for crushed stone purposes and the tailings return to an Austin No. 3 crusher, which again passes it into the elevator. The entire output of the crusher, however, may be by-passed and returned to the dry pan to be ground into sand.

The first screenings from the rotary screen are put through a large sand screen, from which the sand drops and is elevated into a secondary dryer, where it is thoroughly freed from all moisture and

goes to the storage bin. The tailings from the large sand screen are returned through a chute to the dry pan. The aim of this part of the operation is to secure pure silica sand free from all soil, clay or other foreign matter. A large variation in the size of grain received, from 47 to 100-mesh size, and considerable percentage of fine sand, in order to secure the densest possible mix. In appearance the sand seems to be very fine, even to contain a high percentage of dust, but the microscope shows the dust to be fractured particles of quartz grains. It is found necessary to have the sand absolutely dry, so that an even flow to regulate the mix in the measuring machines can be secured. The lime used at the plant is high grade calcium lime running no less than 96 per cent calcium oxide and free from all overburned or underburned lime. The specifications used exclude all lime having more than 2 per cent magnesium oxide.

In the process of manufacturing the sand is brought from the sand storage bin to a small storage bin over the measuring platform by means of a screw conveyor under the sand bin, and then a bucket elevator which chutes it into this feed bin. The lime, which is brought direct from the lime crusher, is taken to a small storage bin over the measuring platform by an elevator and chute. The lime and sand are fed by a constant gravity flow from these bins into a 36-inch trump measuring machine, where it is cut off in the proportions of about one-fifth lime to four-fifths sand. This mix drops into an Abbe tube mill which is about two-thirds full of flint pebbles. The mix is ground



BRICK STORAGE SHEDS, HUMMELSTOWN SAND STONE CO.

sand and sand-lime brick plant having a total capacity of 200 tons of crushed rock, 200 tons of sand which is nearly pure silica and is used extensively for all building purposes within the shipping limits, and 44,000 sand-lime brick.

Henry S. Spackman, of the Spackman Laboratories, of Philadelphia, who was one of the designing and consulting engineers of the plant, was on hand, as was Superintendent R. R. Plean, to assist Messrs. Walton in showing the visitors the general layout and working details of the very successful operations. The record of the present year shows that the plant started on March 5 and manufactured the full output of 44,000 brick per day every working day up to the present, with the exception of twelve days, on nine of which half capacity was made. During the entire time the plant was closed but three working days, made necessary for the cleaning of the boilers. This makes a total output of a little over 10,000,000 brick and shipments to date have been, in round numbers, 9,500,000, with orders shipping and ticketed for delivery amounting to 2,000,000 more, showing that the sales for the year have run over 11,000,000 bricks.

The Hummelstown Plant and Products.

The Hummelstown sand-lime brick is made in connection with and is, in fact, a by-product of the Hummelstown Brownstone Company, which for many years has been a prominent quarrying concern, producing Triassic sandstone of a rich brown color which is used extensively for general building



VIEW OF CRUSHER AND BRICK PLANT.

and mixed here as it passes through the tube mill, coming out the opposite end as fine as flour. This mix as it comes out falls on a screen which removes any small pebbles or any other foreign matter or any lime core which has not been properly ground. The mix falls into an elevator boot and is elevated and dumped direct into the hydrator, which is located on top of the silo bins. The pug hydrator consists simply of a pug paddle conveyor. The mix enters one end and the paddles work it along and mix it. Water is added and thoroughly mixed with it. The mix drops from this into a drag conveyor which carries it across the top of the three silo bins, dropping it into any one of them desired. The mix is allowed to remain in these silos for a period of twenty-four to forty-eight hours, during which time complete hydration takes place. These silos are ventilated to carry off the steam and moisture coming from this hydrating material. Along the bottom of these wedge-shaped silos is another drag conveyor. The silo mix is tapped from any one of these three bins by opening a slide and allowing it to fall into this conveyor, which carries it to the end of the silos and drops it into the boot of an elevator. From here it is elevated and dropped into the silo feed bin located over the measuring platform. At this stage the final mix is made. The silo mix and sand supply bin both feed into a 48-inch trump machine. Here the knives are so adjusted as to cut off silo mix and sand in such quantities that the final mix is $5\frac{1}{2}$ per cent of lime and $94\frac{1}{2}$ per cent of sand. This final mix drops into another elevator which elevates it to the top level of the press room, dis-



TOP ROW, LEFT TO RIGHT—ROBT. J. WALTON AND DR. E. W. LAZELL. BOTTOM ROW—ALLEN G. WALTON, HENRY S. SPACKMAN AND ALLEN K. WALTON.

ROCK PRODUCTS

charging it into a disintegrator, where it is thoroughly mixed and any silo lumps broken up. This mix then falls into a screw conveyor, which continues mixing it as it is conveyed to the press feed bins. The mix flows out at the bottom of these press feed bins onto a revolving table, where an adjustable knife cuts it off in sufficient quantities to feed the brick presses. The mix drops from these tables into the press pug conveyor; this mixes and conveys it to the press, and as it falls into this conveyor the water is added and mixed with it to make it just plastic enough that under the high pressure of the press the green or raw brick has sufficient strength to permit the necessary handling until it reaches the hardening cylinders.

The presses used are two Boyd presses and one White press. These all make four brick to the stroke and apply the pressure by means of a knuckle joint. The brick are loaded on trucks holding 1,000 each and placed in hardening cylinders, where they are subjected to a direct steam pressure of from 125 to 135 pounds pressure for a period of eleven hours. This pressure is recorded by a gauge kept under lock and in charge of the superintendent of the plant. The hardening is done overnight and the finished product taken from the cylinders the following morning. The bricks are allowed to remain on the trucks to cool down to the atmospheric temperature for twenty-four hours before they are either loaded for shipment or piled in the storage sheds. In loading from the piles a Matthews gravity carrier is used. The sheds have a storage capacity of upward of 3,000,000 bricks and the aim is to keep at least 2,000,000 on stock to insure bridging over any unexpected shutdown for repairs or other causes.

Convention "Smoker" a Jolly Affair.

It was after dark when the party of visitors arrived at Harrisburg, having accepted an invitation for an informal "smoker" to be held at the Harrisburg Club. It was a very happy part of the program. It was, in fact, a sumptuous dinner with the whole room pervaded with the jolliest kind of good fellowship, and, with cigars, the occasion developed into a "smoker." Messrs. Allan K. and Robt. J. Walton were the recipients of a beautiful bouquet, prompted by the appreciation of the visitors, which was presented with a few appropriate and touching remarks by W. J. Carmichael. Then there was an hour or two of shop talk in which the anecdotes of plant operations and sales details were gone over.

A little later Mr. Carmichael was presented with a bouquet, as an indication of the good will of the members, because they felt that each of them owed him a posy for the part he has taken by being present at every meeting of the association, and as the newly elected Mayor of Willoughby, Ohio, with a long list of other distinctions which his business ability and popularity has won for him, it is no wonder that the fellows should push him a little. He covered his retreat very well by explaining that he was getting accustomed to receiving bouquets and the Rock Products bunch was able to get a copy of the photograph which showed the way his private office was fixed up for him the morning after his election, November 4 last. Now, it happens that Mr. Carmichael was elected by an enormous majority on a reforming and "Clean the house from cellar to garret" ticket and the folks around the big plant of the American Clay Machinery Company, at Willoughby, decorated the office and lined up the hero of the hour. As he is a modest man, but none the less lovable, they piled it on him until he was embarrassed beyond the command of words or expression. It was the same way at the sand-lime brick convention, for Mr. Carmichael is held in the highest regard as one of the men who has done a great deal for the practical development and growth of the industry. He is a heavy investor in successful sand-lime brick plants and member of the southern executive district of the association.

At the "smoker" practically every one of the delegates had something to say about their building operations. J. A. Bullman, manager of the Alsip Brick & Supply Co., Edmonton, Can., was the delegate who came the longest distance to attend the convention. He told of the progress that had been made in the far-off regions of western Canada. It was past midnight when the jolly "smoker" broke up.

The Wednesday's Sessions.

On Wednesday morning Henry S. Spackman, of Philadelphia, read a splendid technical and practical paper entitled "Essentials for Success in the Manufacture of Sand-Lime Brick." Mr. Spackman's candor in stating the practical uses of the various methods of procedure makes all of his engineering work profitable and attractive. The paper was discussed by W. H. Crume, of Dayton, Ohio, who has had a very wide experience in the prac-

tical manufacture and sale of sand-lime brick under conditions somewhat different from those particularly described in Mr. Spackman's paper, but for the most part these gentlemen, and, indeed, all of those present, agreed on the main essentials of the successful manufacture of sand-lime brick.

A paper by G. Sylvester, of Calgary, Alta., Can., entitled, "Sand-Lime Brick in Canada," was read by the secretary, owing to Mr. Sylvester's unavoidable absence, and showed the present status and outlined the future growth of the industry in the far Northwest.

W. J. Carmichael, manager of the sand-lime brick department of the American Clay Machinery Company, of Willoughby, Ohio, president of Composite Brick Company, Jacksonville, Fla., and vice-president of the Roux Composite Brick Company, Plant City, Fla., gave a paper entitled "Sand-Lime Brick in the Sub-Tropics." As the principal owner of two of the most extensive sand-lime brick plants located in the state of Florida, both enjoying a very profitable demand in their respective markets, he was well qualified to talk on this subject. Mr. Carmichael in his connection with the American Clay Machinery Company has installed sand-lime brick plants in Cuba, Mexico, Hawaiian Islands, and sev-

The report of the committee on nominations was presented by Mr. Squier and unanimously adopted, over the protest of Mr. Goho, who felt that he had served as long as any one member should in the presidency. Mr. Goho's objection was overruled unanimously. The official roster becomes as follows:

President, S. O. Goho, Harrisburg, Pa.

Vice-President, W. H. Terry, Toronto, Ont., Can.
Secretary, W. E. Plummer, Jr., Buffalo, N. Y.

Treasurer, John L. Jackson, Saginaw, Mich.

The executive districts are represented by the following gentlemen:

Central District, L. W. Penfield, Willoughby, Ohio.

Southern District, W. J. Carmichael, Jacksonville, Fla.

Eastern District, W. M. Burchfield, Rochester, N. Y.

Canadian District, G. Sylvester, Calgary, Alta., Can.

A resolution was adopted that the next annual meeting of the Sand-Lime Brick Association will be held at Dayton, Ohio, on the second Tuesday and Wednesday in December, 1914.

The Attendance Roster Is as Follows.

Hummelstown Brownsville Co., Waltonville, Pa., represented by Alan K. Walton, R. J. Walton, Allan G. Walton, Robt. J. Walton, Jr., S. O. Goho, and R. R. Plean.

Birds Hill Sand Lime Brick Co., Winnipeg, Man., represented by D. B. Wood and F. A. Cleary.

Jackson & Church, Saginaw, Mich., represented by John L. Jackson.

Saginaw Brick Company, Saginaw, Mich., represented by John Reineke.

Buffalo Sandstone Brick Co., Buffalo, N. Y., represented by W. E. Plummer, Jr., and A. F. Kempf.

Harbour Brick Co., Toronto, Ont., Can., represented by W. H. Terry.

Winnipeg Sand-Lime Brick Co., Winnipeg, Man., Can., represented by W. D. McFarland.

Grande Brick Co., Grand Rapids, Mich., represented by H. O. Joseph.

Paragon Plaster Co., Syracuse N. Y., represented by W. K. Squier and W. H. Bogg.

Cadwell Sand & Gravel Co., Windsor, Ont., Can., represented by C. W. Cadwell and H. C. French.

Pembrym Brick Co., Pembrym, N. J., represented by E. F. Bacon and B. S. Ayres, Jr.

* Crume Brick Co., Dayton, Ohio, represented by W. H. Crume and R. C. Keiser.

Acme Brick & Sand Co., Milwaukee, Wis., represented by J. G. Toepper.

American Clay Machinery Co., Willoughby, Ohio, represented by L. W. Penfield.

Composite Brick Co., Jacksonville, Fla., represented by W. J. Carmichael.

Rochester Composite Brick Co., Rochester, N. Y., represented by W. M. Burchfield and Homer Knapp.

Alsip Brick & Supply Co., Edmonton, Alta., Can., represented by J. A. Bullman.

York Sandstone Brick Co., Toronto, Ont., Can., represented by Thos. J. Smyth.

Honorary Members.

W. E. Emley, Pittsburg, Pa.; H. S. Spackman, Philadelphia, Pa., and Fred K. Irvine, Chicago, Ill.

SAND FOR FILTRATION PLANTS

In answer to an inquiry from Minnesota, requesting information concerning sand suitable for filters, the United States Geological Survey states that clear white quartz sand of the proper size is the common material used in filter beds. The specifications for the filtration plants at Springfield, Mass., and Toronto, Canada, are practically identical with those of the Washington plant and are as follows:

"The filter sand shall be clean sand, with either sharp or rounded grains. It shall be entirely free from clay, dust, or organic impurities and shall, if necessary, be washed to remove such materials from it. The grains shall, all of them, be of hard material which will not disintegrate. The effective size shall not be less than 0.25 millimeter nor more than 0.35 millimeter. The uniformity coefficient shall not be more than 3.0. The sand shall be free from dust and shall not contain more than 1 per cent finer than 0.13 millimeter, and shall be entirely free from particles over 5 millimeters in diameter. The sand shall not contain more than 2 per cent by weight of lime and magnesia taken together as carbonates. In all other respects the sand shall be of a quality satisfactory to the engineer."

Gravel for the floor of filters may be broken trap rock or granite screened to the proper sizes, or gravel screened from sand and gravel banks of a sandy nature. Gravel screened from hardpan or clayey material can not be sufficiently cleaned. The gravel should not contain more than a very small amount of shale or limestone and should be washed entirely free from fine material.



W. J. CARMICHAEL, MAYOR OF WILLOUGHBY, O., AND SAND-LIME BRICK MAGNET.



FACE BRICK MEN HOLD CONVENTION.

Dealers and Manufacturers Hold Dual Session at French Lick, Ind., December 10-12.

The largest assemblage of face brick men ever held gathered at French Lick, Ind., on December 10-12, at the French Lick Springs hotel, where meetings of the American Face Brick Association and Face Brick Dealers' Association of America were held in separate halls on the second and third floors of that hostelry. The conventions were extremely successful in point of closer relationship and a more intelligent understanding as to the duties of each organization to the other, and were attended by 126 dealers and manufacturers. While the meetings of the two organizations were held separately, a joint session on Thursday and one or two minor conferences helped to bring about a mutual understanding between the dealers and manufacturers. Tentative plans were laid by which it is believed existing evils will be corrected.

Dealers' Convention.

This gathering marked the first annual get-together of the Face Brick Dealers' Association of America, which was organized only one year ago, and was largely attended by its membership, there being 18 members on hand and 26 applications being admitted to membership during the convention, making a total of 45 members present. President F. Lawson Moores announced that no special program had been prepared and that the speakers could voice their opinions on any topics that were pertinent to the industry which he realized would be of the greatest information to the membership generally.

The first subject discussed was the eligibility of members, and Article 4, Section 2 of the by-laws was amended to read: "Any individual, firm, or corporation representing five or more face brick manufacturers dealing regularly in face brick may become a member by being endorsed by any two members LOCATED NEAREST OR IN THE CITY IN WHICH THE APPLICATION IS LOCATED, and BEING accepted by the board of directors." The words capitalized above indicate that which was inserted by the amendment. Stockholders or part owners in establishments manufacturing face brick can also become members, it was decided, should they be firms dealing regularly in face brick and answering the requirements of the amended section.

The executive committee was instructed to incorporate the association in the state that would best serve the interests of the organization.

A resolution was introduced by Secretary Queisser which provided that three members of the dealers' association and three members of the manufacturers' association be appointed to enlist the interest of the U. S. Government in issuing bulletins and giving out other information about the brick industry in a manner similar to that furnished for the farmer, the cement man, and others. The resolution being adopted at the joint session of both the associations, B. F. Mifflin Hood, of Atlanta, Ga.; Wm. A. Black, of New York, and Herman Matz, of Chicago, were selected by the dealers to serve on this committee. The members of the manufacturers' committee have not yet been selected.

Will P. Blair, secretary of the National Paving Brick Manufacturers' Association, Cleveland, Ohio, was present at the joint session of the dealers and manufacturers and told how his organization had interested the government in getting out the first bulletin of an educational nature on clay products. The bulletin issued under date of September 17th was one of the best arguments, he said, for the use of vitrified paving block ever printed. He also informed the members that a number had already been prepared by the government for the purpose of distributing such information as was desired by the dealers, stating that the Bureau of Standards was in charge of the same.

The constitution of the association was supplemented by an amendment which provides for the selection of vice-presidents from every state represented by the membership, the officers selected being required to serve one year. They will be chosen by the executive committee. As yet no appointments have been made under the new rule.

It was also decided that quarterly meetings in various sections of the country be held during the year. Cleveland, Ohio, was selected as the next meet-

ing place, but the date for same has not yet been decided upon.

Secretary Queisser declared that the three days' meeting was one of the most profitable conventions he ever had attended. "It has resulted in a far better understanding between the various dealers and has enabled us to learn the problems and pave the way for their solution that would have been impossible under any other method," said Mr. Queisser. "I might add also that we are brought into closer touch with the manufacturers by meeting with them in this session and certainly our conferences and joint session will do much good towards improving conditions."

The new officers selected for the coming year are as follows:

President—F. Lawson Moores, Moores-Coney Co., Cincinnati, Ohio.

Secretary-Treasurer—R. L. Queisser, Queisser-Bliss Co., Cleveland, Ohio.

Vice-Presidents—A. B. Meyer, A. B. Meyer Co., Indianapolis, Ind.; E. F. Knight, Buffalo Builders' Supply Co., Buffalo, N. Y.; W. G. Thomas, Thomas Bros. & Co., Detroit, Mich.; L. W. Gaddis, Gaddis-Harrison Co., Columbus, Ohio; Herman L. Matz, S. S. Kimbell Co., Chicago, Ill.; F. J. Nixon, Paine-Nixon Co., Duluth, Minn.; and Geo. Schwartz, Rickertson & Schwartz, Milwaukee, Wis.

Executive Committee—A. E. Bradshaw, Indianapolis, Ind.; W. A. Fay, Cleveland, Ohio; B. F.

mansiphip," by H. W. Holmes, of the Puritan Brick Company, Detroit, Mich.

A banquet was given the delegates of both organizations on Thursday evening by Thos. Taggart, proprietor of the French Lick Springs hotel. A special musical program also was arranged by the hotel orchestra.

On Friday morning the election of officers was held which resulted as follows:

President—Joseph W. Moulding, Thomas Moulding Brick Co., Chicago, Ill.

First Vice-President—E. C. Clark, Kittanning Brick & Fire Clay Co., Pittsburgh, Pa.

Second Vice-President—J. W. Sibley, Sibley-Menge Brick & Clay Co., Birmingham, Ala.

Secretary-Treasurer—R. D. T. Hollowell, Pittsburgh, Pa.

The new directors elected were: Joseph W. Moulding, ex-officio; E. C. Clark, ex-officio; J. W. Sibley, ex-officio; L. G. Kilbourne, Paul B. Belden, of the Belden Brick Company, Canton, Ohio; J. Parker B. Fiske, of the Fiske & Company, Inc., New York; S. Siwart Smit, of the Twin City Brick Company, St. Paul, Minn.

After a brief session Friday afternoon the convention adjourned sine die.

The official roster of the attendance at the two conventions appears below:

Dealers Present.

F. B. Adams, Indianapolis, Ind.
L. R. Binyon, S. S. Kimbell Brick Co., Chicago, Ill.
W. C. Black, Cake & Black, New York, N. Y.
Charles Bonner, Bonner & Marshall Brick Co., Chicago, Ill.

Chas. A. Bonner, Bonner & Marshall Brick Co., Chicago, Ill.

A. E. Bradshaw, Indianapolis Mortar & Fuel Co., Indianapolis, Ind.

E. K. Cormack, Wisconsin Lime & Cement Co., Chicago, Ill.

J. C. Crigler, Gaddis-Harrison Brick Co., Dayton, Ohio.

Guy P. Dean, Pfotenhauer-Nesbit Co., New York, N. Y.

R. S. Dingledine, Columbus Contractors' Supply Co., Columbus, Ohio.

J. A. Dolben, Dolben & Sullivan, Boston, Mass.

W. A. Fay, Cuyahoga Builders' Supply Co., Cleveland, Ohio.

T. B. Foreman, Pittsburgh Clay Products Co., Pittsburgh, Pa.

G. H. Francis, Keystone Clay Products Co., Greensburg, Pa.

LeRoy W. Gaddis, Gaddis-Harrison Brick Co., Columbus, Ohio.

E. A. Guner, Queisser-Bliss Co., Cleveland, Ohio.

E. F. Grand, Purcell-Grand Co., Cincinnati, Ohio.

R. B. Harbison, Gaddis-Harrison Brick Co., Dayton, Ohio.

C. E. Harding, Waldo Brothers, Boston, Mass.

Chris F. Harrison, Gaddis-Harrison Brick Co., Columbus, Ohio.

J. A. Hogan, S. S. Kimbell Brick Co., Chicago, Ill.

F. B. Holmes, F. B. Holmes Co., Detroit, Mich.

B. Mifflin Hood, B. Mifflin Hood Brick Co., Atlanta, Ga.

Albert D. Klein, Sunderland Brothers Co., Omaha, Neb.

Edwin T. Knight, Buffalo Builders' Supply Co., Inc., Buffalo, N. Y.

Emil M. Kratz, Pennsylvania Coal & Supply Co., Milwaukee, Wis.

V. H. Kriegshaber, V. H. Kriegshaber & Son, Atlanta, Ga.

M. N. Kimbell, S. S. Kimbell Brick Co., Chicago, Ill.

J. F. Leonard, Cuyahoga Builders' Supply Co., Cleveland, Ohio.

H. D. Lounsbury, Fredenburg, Lounsbury & Hough-

ton, Inc., New York, N. Y.

James J. Lyons, Meacham & Wright Brick Co., Chicago, Ill.

F. C. Manson, Pfotenhauer-Nesbit Co., New York, N. Y.

Herman L. Matz, S. S. Kimbell Brick Co., Chicago, Ill.

John D. Matz, S. S. Kimbell Brick Co., Chicago, Ill.

C. E. McCammon, L. H. McCammon Brothers, Cincinnati, Ohio.

F. H. McDonald, Grand Rapids, Mich.

David McGill, Montreal, Canada.

W. L. McGiverin, Dartnell, Ltd., Montreal, Can.

C. W. Meeker, Newark, N. J.

A. B. Meyer, A. B. Meyer & Co., Indianapolis, Ind.

E. H. Moellering, Fort Wayne, Ind.

F. Lawson Moores, Moores-Coney Co., Cincinnati, Ohio.

Frank J. Nixon, Paine & Nixon Co., Duluth, Minn.

L. A. Norman, Grand Rapids, Mich.

G. J. Parke, G. J. Parke & Sons Co., Decatur, Ill.

Harry C. Poldolsky, Bonner & Marshall Brick Co., Chicago, Ill.



F. LAWSON MOORES, THE MOORES-CONEY CO., CINCINNATI, OHIO.

Holmes, Detroit, Mich.; F. Lawson Moores, Cincinnati, and R. L. Queisser, Cleveland, Ohio.

Manufacturers' Convention.

The manufacturers' convention opened Wednesday afternoon with meeting of the board of directors, shortly after which the first session of the membership was held at which president L. G. Kilbourne read his annual address. Secretary Hollowell then made his first annual report, after which the new constitution and by-laws was presented and the session adjourned until the following day, Thursday, when action on the same would be taken.

On Thursday morning Jos. W. Moulding, who was afterwards elected president of the association, read a paper entitled, "The Advantages of Adopting Uniform Methods to Improve Service of the Members," which was highly appreciated by all present.

Secretary Hollowell made a report on traffic matters and work that had come under the association in the past year, which was very edifying.

Following Secretary Hollowell, Frank W. Butterworth, of the Western Brick Company, Danville, Ill., read a paper on "The Ethics of Selling Brick."

On Thursday afternoon President Kilbourne presided over the joint session of the two associations, which was largely attended both by members and by invited guests, and at which the following papers were read: "What the Manufacturers and Dealers Owe Each Other" by W. S. Smit, of the Twin City Brick Company, St. Paul, Minn.; "Price Cutting," by Iverson C. Wells, editor of the Brick & Clay Record; "The Renaissance in Brick," by Arthur D. Rogers, editor of the Brick Builder; "The Possibilities of Organization," by Theo. Randall, editor of the Clay Worker, and "Price Cutting versus Sales-

Walter Pursell, The Pursell-Grand Co., Cincinnati, Ohio.

R. L. Queisser, The Queisser-Bliss Co., Cleveland, Ohio.

A. S. Reid, A. S. Reid & Co., Newark, N. J.

Theo. C. Schwier, Fort Wayne, Ind.

Ralph Spencer, Dresden Brick Co., Detroit, Mich.

Louis Snavely, Minglewood Coal Co., Wooster, Ohio.

John M. Stone, Cincinnati Clay Products Co., Cincinnati, Ohio.

Theo. H. Swain, Rochester, N. Y.

Alfred Tyler, Baltimore, Md.

F. R. Upton, Newark, N. J.

Wm. P. Varney, Hydraulic-Press Brick Co., Chicago, Ill.

Samuel E. Walter, Standard Salt & Cement Co., Duluth, Minn.

Donnelly Wever, The Moores-Coney Co., Cincinnati, Ohio.

F. G. White, Jenkins & Reynolds, Chicago, Ill.

Edw. Whitehall, Milwaukee, Wis.

James P. Williams, St. Louis, Mo.

W. H. Willis, The Storey-Willis B. & S. Co., Cincinnati, Ohio.

Manufacturers Present.

J. M. Adams, The Ironclay Brick Co., Columbus, Ohio.

John Andres, Standard Brick Mfg. Co., Evansville, Ind.

B. W. Ballou, Kansas Bluff Brick & Mfg. Co., Buffalo, Kans.

H. R. Beagle, Beaver Clay Mfg. Co., New Galilee, Pa.

James G. Beemer, Chestnut Ridge Brick Co., New York, N. Y.

James G. Beemer, Jr., Chestnut Ridge Brick Co., New York, N. Y.

P. B. Belden, Belden Brick Co., Canton, Ohio.

J. H. Black, Jewettville Brick Co., Buffalo, N. Y.

F. W. Butterworth, Western Brick Co., Danville, Ill.

E. Curtis Clark, Kittanning Brick & Fire Clay Co., Pittsburgh, Pa.

Ed. H. Cobb, Hydraulic Press Brick Co., Minneapolis, Minn.

B. T. Cotter, Coshocton Brick Co., Coshocton, Ohio.

H. C. Cramex, Lexington Brick Co., Lexington, Ky.

Jos. Degenhart, Jewettville Brick Co., Buffalo, N. Y.

M. Me. Everhard, The Everhard Co., Massillon, Ohio.

Ben S. Fisher, Columbus Brick & Terra Cotta Co., Union Furnace, Ohio.

J. Parker B. Fiske, Fiske & Company, Inc., New York, N. Y.

C. A. Gardner, Am. Enam. Brick & Tile Co., New York, N. Y.

H. S. Hamilton, McArthur Brick Co., McArthur, Ohio.

Chas. T. Harris, Fiske & Company, Inc., New York, N. Y.

F. A. Hoiles, Alliance Brick Co., Alliance, Ohio.

S. J. Hewson, Hydraulic Press Brick Co., Minneapolis, Minn.

R. D. T. Hollowell, Sec'y., Amer. Face Brick Ass'n., Pittsburgh, Pa.

H. W. Holmes, Puritan Brick Co., Detroit, Mich.

E. C. Howard, Claycraft Brick Co., Columbus, Ohio.

D. J. Kennedy, Darlington Brick & Mfg. Co., Pittsburgh, Pa.

L. G. Kilbourne, Columbus Brick & Terra Cotta Co., Columbus, Ohio.

F. C. La Fountain, Kansas Bluff Brick & Mfg. Co., Kansas City, Mo.

G. B. Luckett, Crawfordsville Shale Brick Co., Crawfordsville, Ind.

C. P. McFadden, Toronto Fire Clay Co., Toronto, Ohio.

G. W. McNees, Kittanning Clay Mfg. Co., Kittanning, Pa.

L. W. McSprague, McArthur Brick Co., McArthur, Ohio.

J. W. Moulding, Thomas Moulding Brick Co., Chicago, Ill.

Thomas C. Moulding, Thomas Moulding Brick Co., Chicago, Ill.

J. B. Nicholson, Toronto Fire Clay Co., Toronto, Ohio.

John A. Qualman, Saginaw Paving Brick Co., Saginaw, Mich.

Daniel E. Reagan, Hocking Valley Products Co., Columbus, Ohio.

W. D. Richardson, Claycraft Mfg. & Brick Co., Shawnee, Ohio.

John W. Sibley, Sibley-Menge Brick Coal Co., Birmingham, Ala.

Ralph Simpkins, Hydraulic Press Brick Co., St. Louis, Mo.

W. Siwart Smith, Twin City Brick Co., St. Paul, Minn.

J. S. Snyder, Brazil Clay Co., Brazil, Ind.

E. A. Stewart, Stark Brick Co., Canton, Ohio.

Chas. C. Stratton, Alumina Shale Brick Co., Bradford, Pa.

Carl C. Walters, Hocking Valley Products Co., Columbus, Ohio.

J. H. Zeller, Brazil Clay Co., Brazil, Ind.

Guests Present.

G. A. Anderson, J. D. Fate Company, Plymouth, Ohio.

Will P. Blair, National Paving Blk. Mfrs. Ass'n., Cleveland, Ohio.

B. I. Grossner, Queen & Crescent Route, Cincinnati, Ohio.

W. W. McCall, "Dealers' Record," Chicago, Ill.

George A. Olsen, "Dealers' Record," Chicago, Ill.

Theo. A. Randall, Editor "Clay Worker," Indianapolis, Ind.

Ralph Reinhold, Rogers & Manson Co., New York, N. Y.

Arthur D. Rogers, Editor "Brickbuilder," Boston, Mass.

A. R. Root, Chambers Brothers Co., Philadelphia, Pa.

C. L. Rorick, Bus. Mgr., "Brick & Clay Record," Chicago, Ill.

Walter Schapper, Rossler & Hasslacher Chemical Co., Chicago, Ill.

C. B. Sherer, American Clay Machinery Co., Bucyrus, Ohio.

J. Crow Taylor, "Clay Worker," Indianapolis, Ind.

Iverson C. Wells, Editor "Brick & Clay Record," Chicago, Ill.

C. C. Woodworth, Southern Railway, Cincinnati, Ohio.

WHEN FIRE BRICK WILL MELT.

Federal Tests Show Maximum Heat Various Kinds Will Withstand.

According to the United States Bureau of Standards, the melting points of fire brick are as follows: The most common fire brick, or those made of clay of which the main ingredient is kaolin, will melt at a temperature ranging from 2,831 to 3,137 degrees F.; bauxite brick, from 2,949 to 3,245 degrees; silica brick, from 3,092 to 3,101 degrees; chromite brick, at 3,722 degrees, and magnesia brick, at 4,929 degrees. These melting points, which represent the lowest temperature at which a small piece of the brick could be distinctly seen to flow, were determined in an electric vacuum furnace, the temperature being measured with an optical pyrometer.—Construction News.

NO CLAY SHOW IN 1914.

It has been decided to hold the next Clay Products Exposition at San Francisco during the Panama Exposition, therefore omitting the 1914 show. The exposition company desires to erect a permanent clay products building at the Panama show and will conserve its resources in this manner. This building will be open the entire year of 1915 and will house an international exhibit, as well as afford ample accommodations for conventions and meetings of the various organizations.

PORCELAIN TILE.

A new building material has been invented recently by Wheeles Turner, a member of a great pottery family. The material is porcelain. Mr. Turner has spent 40 years in obtaining porcelain tiles strong enough to build a house of the required strength and cheapness, and it is his contention that such houses would be especially suitable for rural districts. The houses will consist of steel framework to which are fitted by simple means large porcelain tiles. The tiles are one inch thick and the doorways and wainscoting are of steel. The walls, floors and ceilings are all of porcelain and not only waterproof but steamproof.

SEWER PIPE REMAINS FIRM.

Some two weeks ago the general trade was very much surprised to receive notice of an advance in the price of sewer pipe. The usual procedure is a falling off in prices about this season of the year. In fact, a decline began, but a rally on the part of certain of the manufacturers checked matters and the movement was strong enough to put prices back to a level established early in the spring.

The exceedingly mild weather had helped the situation from the manufacturers' standpoint, as it has enabled contractors to proceed with work that might otherwise have been held over until next year. Quite a number of the factories still report "no stocks," and no doubt it will take a period of severe winter weather before any great accumulation is noticeable at the plants. As to whether the manufacturers can hold the present high scale of prices in the face of the coming slack period remains to be seen. Buying except for immediate needs has entirely ceased.

REXALL BELTING OFFERED AS A REMEDY FOR TWO COMMON BELT TROUBLES.

The illustrations shown herewith are familiar to most users of belting for conveying and elevating.

Fig. 1 shows how the ordinary rubber or canvas belt, made in the old way, opens up between the plies as soon as the friction lets loose, as the result of deterioration, or where the stitches in an ordinary canvas belt have been worn or cut.



FIG. 1.

Fig. 2 shows the result of edge abrasion on some belts, particularly those of the "solid woven" type.

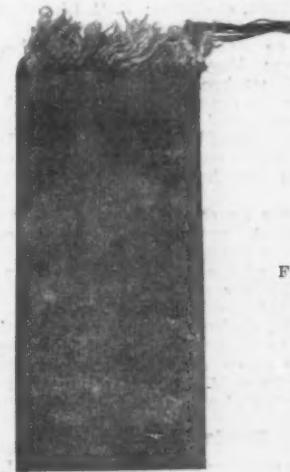


FIG. 2.

Fig. 3 represents a piece of "Rexal Double-Stitched" belting, showing the "protected" inner stitches which no amount of surface abrasion can cut or wear off. Many instances are on record where the outer plies in a "Rexall" belt have been worn entirely away, leaving the center or body of the belt intact, which makes it possible to obtain the maximum service from the belt. This is especially advantageous in conveyor belting where abrasive action is a prominent element of destruction.

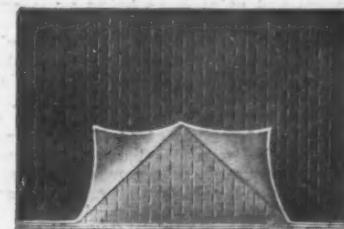


FIG. 3.

Attention is also called to the scientific edge construction of "Rexall" belting. These edges are made "double-rounded," that is, each side of the belt has rounded edges; and while it is well known that an ordinary piled or raw edge in a belt will readily suffer from abrasion, these rounded edges as shown in Fig. 3 will not readily catch on a projection.

The Imperial Belting Company are now in their new Chicago factory, located at Lincoln and Kinzie streets.

A significant item of interest in connection with the large volume of business which this enterprising concern is doing in their line is the fact that they are carrying in stock at their Chicago factory all sizes from 1 inch to 36 inches wide inclusive, in 1000-foot rolls. They will welcome an opportunity to supply all interested parties with complete information regarding their "Rexall" product.

AMERICAN INSTITUTE OF ARCHITECTS

Forty-seventh Annual Convention Held in New Orleans, December 2-3-4.

The American Institute of Architects held its forty-seventh annual convention at New Orleans, La., in the Gold Room of the Hotel Grunewald, December 2-3-4, there being about 125 members present. On Monday preceding the convention the board of directors of the institute met and mapped out plans to be followed in the convention. The board appointed the following committees:

Committee on Credentials—A. W. Rice, Boston, chairman; W. B. Ittner, St. Louis; Robert Stead, Washington.

Committee on President's Address—C. A. Favrot, New Orleans, chairman; G. M. Anderson, Cincinnati; B. J. Lubschez, Kansas City.

Committee on Directors' Report—C. H. Alden, Seattle, chairman; J. H. Rankin, Philadelphia; E. C. Jensen, Chicago.

Committee on Chapters' Reports—F. J. McDonnell, New Orleans, chairman; Frank E. Wetherill, Des Moines; W. R. Briggs, Bridgeport.

Committee on Standing Committee's Report—F. M. Day, Philadelphia, chairman; F. H. Quimby, Brooklyn; W. D. Stratton, Detroit.

Committee on Special Committee's Report—W. A. Boring, New York, chairman; J. C. Llewellyn, Chicago; F. D. Parmentier, Los Angeles.

Committee on Resolutions—Robert Kohn, New York, chairman; Hugh Roberts, Newark; W. H. Schuchardt, Milwaukee.

Delegates to the convention were met each morning at the hotels and shown the city before the sessions opened. On Monday night, December 1st, the whole delegation was the guest of the Louisiana Chapter at the French Opera, where they saw "Il Trovatore."

The committee on competitions held a long session at the Hotel Grunewald on the same evening to discuss the rules governing competition work and the details of the technical side of the craft. Chairman B. Medary presided.

The public information committee, D. K. Boyd, of Philadelphia, chairman, also held a meeting on that evening to discuss its work. The committee mapped out a more extended campaign for the education of the public in connection with architectural designing of public work.

Tuesday's Session.

On Tuesday morning State Senator John J. Riley delivered an address of welcome, speaking in behalf of both Mayor Behrman and Governor Hall, who were unable to attend.

President Walter Cook then delivered his annual address, which was followed by numerous committee reports.

Grosvenor Atterbury, chairman of the committee on contracts and specifications, pleaded for the establishment of a national basis building code, citing conditions in various cities and calling attention to the wide difference.

Thomas R. Kimball, chairman of the committee on allied arts, spoke of the co-operation of architects, sculptors and painters as being necessary to properly encourage good craftsmanship.

H. V. B. Magonigle, chairman of the committee on town planning, said that each architect should be the leading support in civic improvement in his section.

D. Knickerbocker Boyd, chairman of the committee on public information, told of the necessity for co-operation between local architects, newspapers and trade journals as a means of educating the public to demand a higher standard of architecture and a better type of construction.

On Tuesday evening the visiting architects and their wives attended a tea given in their honor by the Newcomb Art Alumnae at the Newcomb Pottery.

The committee on education, Acting Chairman C. C. Zantsinger, of Philadelphia, presiding, held a meeting in Parlor J of the Grunewald to consider routine business which had come before it.

The day was brought to a joyous culmination by a reception at the Delgado Art Museum, City Park, where several hundred members attended.

At the closing session the following resolutions were adopted:

"Resolved, That it is the sense of this convention that some orderly system should be adopted by the United States government in the designing of its buildings, monuments, etc., in the purchase, selection and acceptance of sculpture, painting and other works of art, whereby the services of those architects, sculptors and painters best qualified for such work may be made available; that the board of directors be requested to have prepared for proposed legislation along the broadest lines to

give effect to this resolution, the same to be submitted, if possible, to the next convention of the institute; and be it further

"Resolved, That in the meantime the board be requested, if it deems such course wise, to prepare proposals for legislation for submission to Congress, whereby the congestion in the treasury department may be relieved by the employment, through selection or by competition of architects in private practice, for the work in that department."

Nominations Made.

Nominations for the various officers to be elected at the closing session narrowed down to the following:

President, R. Clipson Sturgis, Boston.

First vice-president, T. R. Kimball, Omaha.

Second vice-president, F. C. Baldwin, Washington.

Secretary, Glenn Brown, Washington, and D. Knickerbocker Boyd, Philadelphia.

Treasurer, John Laurence Maurau, St. Louis, and Frank H. Quinby, Brooklyn.

Directors—Octavius Morgan, Los Angeles; Thomas H. Morgan, Atlanta; R. B. Wilcox, Seattle; Edward Stotz, Pittsburgh; T. C. Young, St. Louis, and B. Green, Buffalo. (Four to be elected.)

Auditor, Robert Stead, Washington, and Irving K. Pond, Chicago.

Resolutions were adopted to the memory of Prof. Charles Babcock, of Princeton, who died last August. A resolution was also adopted to the memory of Geo. B. Post, former president of the institute, who died during the past year. The convention came to an official close at noon Thursday, after which the members and their wives were taken as guests of the Louisiana Chapter on board a boat which went directly to the old Hurst place, where the architects found much to marvel in the beauty of the old southern home. On Thursday evening delegates were the guests at a banquet at the Hotel Grunewald, at which Hon. John M. Parker, Geo. H. Terriberry were among the prominent speakers. Retiring President Walter Cook was toastmaster.

On Friday the architects visited the architectural department of Tulane University in a body.

THE CHICAGO CHAPTER OF NATIONAL FIRE PROTECTION ASSOCIATION ORGANIZED.

The movement to organize a Chicago Chapter of the National Fire Protection Association seemed to make some progress when, on Monday evening, December 15, about forty-five or fifty members of the National organization met at the Hotel LaSalle in response to a summons from the National secretary. The meeting was called at 8:10 p. m.

W. H. Merrill was chairman, and as soon as the meeting was called to order introduced Franklin H. Wentworth, secretary of the national organization. In his remarks Mr. Wentworth stated that there were nearly 3,000 members in the national organization, but that this number was not enough, and the fault lay in the difficulty of reaching the public. He said that it was thought that if local chapters could be organized in each city these local chapters could reach out and get the public aroused in these cities over the necessity of fire protection. He said that whenever anything comes up now there is no real organization to cover the details. He told the members that there are at present one hundred and ninety-two associate members of the national organization in Chicago, and forty in Winnipeg. He said that a committee should be appointed to organize a speakers' bureau, to provide lectures and stereopticon pictures, moving pictures, etc., showing the dangers from fire, and educate the public regarding the damage resulting from carelessness, and show them how dangers can be avoided, and in that way lessen losses by fire each year. It should be taken up in the schools to show the dangers to children. Architects should be interested, and some effort should be made to cut down these dangers.

He told us that the financial part of it is easy, because the members are required to pay but \$5 a year, and \$1 of this sum the national organization intends to leave in the hands of the local chapter for stenographic work, pay of secretary and other incidentals. He also said that Mr. Glidden, manager of the Fire Underwriters' Association, had said that he hoped a certain room in the Insurance Exchange Building in Chicago could be used for some civic purpose, and perhaps this room could be secured for future meetings without charge. He suggested a resolution amalgamating into one large chapter, with a committee on public information, making its by-laws in harmony with the national organization in Boston.

Chairman Merrill then made a brief address, stating that they were in a position to start favorably, with money in the bank, and ready for an affiliation with the national organization. He stated that it would be a good thing to put Chicago on the map, but that this chapter could not be first because Winnipeg had already started. It was then proposed that the members organize into a Committee on Public Information. This was made a resolution and unanimously carried. Mr. Wentworth stated that a president, vice-president, secretary and treasurer and a newspaper committee would be necessary.

It was moved, seconded and carried that the chairman appoint a nominating committee to nominate a president, secretary and treasurer. The chairman appointed Ernest Palmer, T. R. Wardell and C. L. Hecox as a nominating committee. The chairman then stated that it was planned to hold monthly meetings, with speakers, special papers, etc. He said that the City Club of Chicago, the Chicago Chamber of Commerce and a few other clubs have fire protection committees, but they are lesser committees of clubs having other purposes and that the committees often get off the right track. He said that if this chapter got 1,000 members it could then have a prominent part in the national organization. He then asked Mr. Wentworth how this movement is being received in other cities.

Mr. Wentworth replied that Boston is so enthusiastic that the State Fire Prevention Association had voted to merge with the Boston Chapter. He said that the Massachusetts state people receive all the publications issued by the national organization and could only get them when merged with the Boston chapter. In all cities, he said, the people are interested. No city in the United States has effected a permanent organization, and Winnipeg is the only one in Canada.

The nominating committee nominated for president Frank D. Chase, of the firm of Gaut & Chase, engineers, 122 South Michigan avenue; secretary and treasurer, W. S. Boyd, 76 West Monroe street.

Mr. Chase, the newly elected president, took the chair and made a short address in which he stated that he thought this was a big thing and that the opportunities were unlimited. He said the time is right now; that it is true that an effort had been made in this direction, but that the effort has been disjointed and pulling in different directions. He stated that the best committee is one that can get all others together, which can be merged into one that the board of aldermen cannot overlook. He said that he was glad to be in it to work, and that the chapter could look for co-operation from the fire department, architects and all technical bodies. He felt sure that the chapter could count on all department stores and engineers. But one thing is sure, and that is, there must be co-operation.

It is the intention to hold another meeting after the holidays and organize standing committees. Mr. Sanderson thought that a committee of six, representing the different organizations, should be appointed to look into and report on the proper qualifications for the various committees. He also thought that the chapter should form a list of "don'ts" for architects. Mr. Sanderson then moved that a committee of six be appointed temporarily to take the place of an executive committee to arrange for the next meeting. Mr. Merrill suggested four instead of six, and that the officers send the minutes of this meeting to each member with a call to meet in the Insurance Exchange Building and arrange a program for the next meeting. He said he thought two members would do for the committee as well as four, and President Chase wanted them elected or appointed at once.

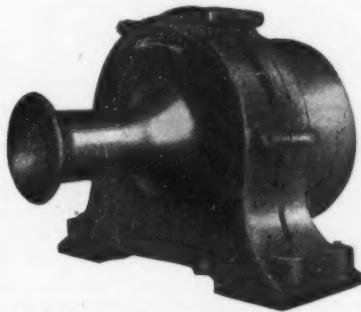
A motion was adopted providing that the president and secretary appoint a committee to formulate plans for the next meeting. The president then asked for suggestions and Mr. Glidden informed the members that there is a room in the Insurance Exchange Building which the chapter is welcome to at any time free of charge, and he hoped for a large attendance at the next meeting. He suggested individual effort on the part of each of the members, and urged them not to let the officers do all the work alone.

Mr. Wentworth announced that President Robert F. Cohn of the national organization will speak in Minneapolis about January 20, and suggested that the Chicago chapter have him present at their meeting. He suggested that all the technical bodies in Chicago be invited to attend the next meeting, which received hearty approval. The members offered to extend invitations to the bodies with which they are familiar.

The meeting then adjourned to meet again about the middle of January, and thus was a unique organization born in the city of Chicago, under the most favorable circumstances, and we look for much progress in the future along these lines.

"S-A" SAFETY CAR PULLER.

The handling of cars on the siding is frequently a serious problem involving an unnecessary expenditure of time and temper. Only where the number of cars to be handled about a plant is sufficiently large to warrant the use of a small locomotive is the problem comparatively simple; or again, the oc-



"S-A" SAFETY CAR PULLER, FOR USE WITH MANILLA ROPE.

casional moving of a single car may be taken care of with one of the several very good hand levers or "car movers" that are on the market.

Between the very few and the great many cars, however, there is a gap which can only be filled by means of a power car puller similar to that recently put on the market by the Stephens-Adamson Mfg. Co., Aurora, Ill., and known as their Model No. 999. This machine consists essentially of a cast iron case, housing a reducing gear mechanism which connects the driving pulley to the capstan. The heavy cast iron case serves a three-fold purpose, acting as the supporting frame, gear guard, and also as part of the planetary gear train. On this account it was possible to design a very compact machine and at the same time sufficiently rugged and powerful to meet all requirements of this service.

In operation a manila rope may be given a couple of wraps about the capstan and the friction created by pulling on the free end of the rope is sufficient to move several loaded cars on a level track at a speed of about 80 feet per minute. The car/puller may be located in any convenient place beside the track without danger of exposed gears. By using guide rolls and pulley blocks it can serve a considerable length of straight or curved track, hauling cars in either direction.

This car puller may be belted to a line shaft or motor, although where the current is available an electric motor, direct geared to the car puller, makes the most convenient arrangement. The car puller is furnished by the manufacturers, when desired, mounted upon a steel base geared to any standard motor.

Many prefer to have this car puller direct geared to an electric motor. In this case the company furnishes a rigid steel base for the motor and car puller, driving through cut gears. This makes a very compact and convenient power driven car puller. It is absolutely safe as there are no exposed gears or moving parts other than the slow moving capstan.

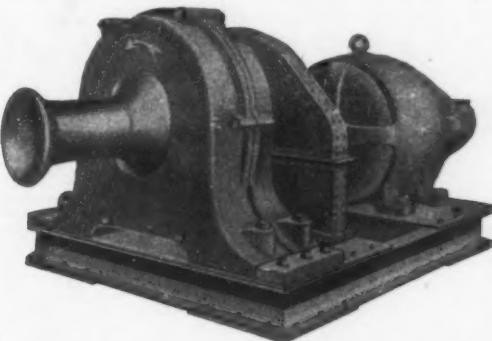
Inquiries regarding this machine should state the power available, or if it is desired to furnish the motor separate, advise the size and type.

HERCULES SOLID WELD CHAINS.

The Columbus Chain Co., manufacturers of all standard and special makes of chain, with main

plant and offices at Columbus, Ohio, and branch at Lebanon, Pa., have established an enviable reputation for lightening the burdens of steam shovel operators, and, in fact, of all the users of chain where the requirements are exacting. The old maxim that "A chain is no stronger than its weakest link" still holds good, but with "Hercules Solid Weld" the weak link is entirely eliminated.

These chains are made of tough, high-grade hammered iron and manufactured in such a way that



NO. 999 SELF-CONTAINED MOTOR-DRIVEN CAR PULLER.

makes every part of each link as strong as the solid bar. There are no slip welds to pull apart when the chain shows sign of wear. Hercules Solid Weld chains wear out but never break; they are accepted as a standard by the Government and have been used in the Canal Zone and in all parts of the United States and Canada where their service is required. The chains are kept in stock and can

be shipped on short notice. Descriptive information cheerfully furnished, backed by strong testimonials.

LINK-BELT CAR UNLOADER.

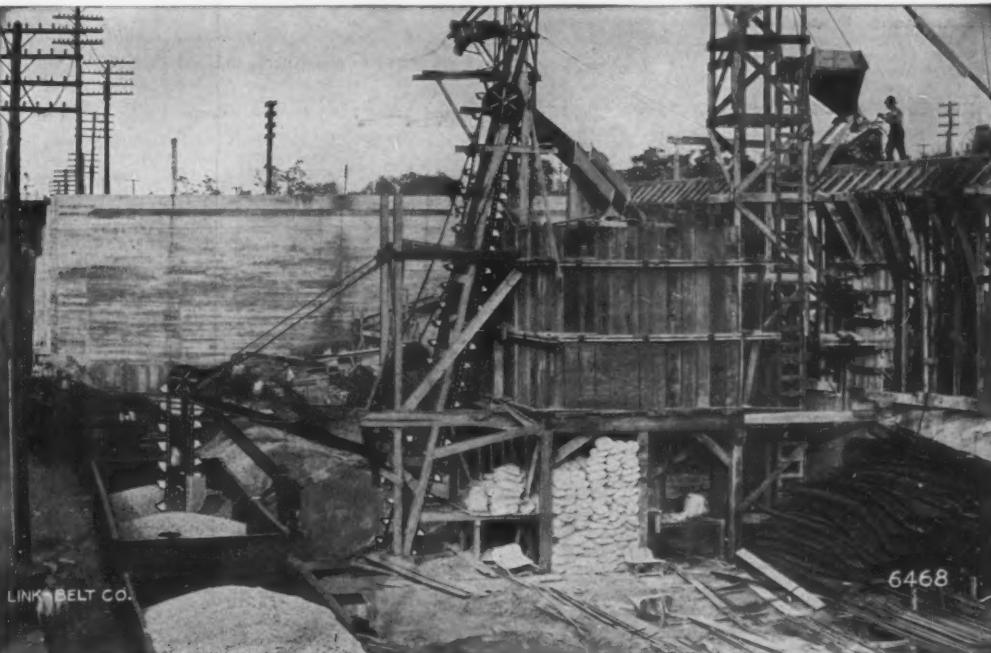
The Link-Belt Company, Chicago, and with offices in many of the principal cities of the U. S., has recently put on the market a machine for unloading gondola cars filled with sand, stone, gravel, etc. With this simple outfit two or three men can unload a car of material at the rate of 50 tons an hour.

A comparison of the cost of unloading by this method and the old-fashioned way of using 8 or 10 shovels in the car, throwing over the side, will illustrate clearly the value of the unloader, where any quantity of cars must be unloaded in a day.

Unloading cars with hand labor costs from 8 to 10 cents per ton. The Link-Belt Unloader will not only do this same work more rapidly, but in actual operation it has reduced the labor cost to about 1½ cents per ton.

The machinery consists of a heavy elevator on a steel frame, hung on the end of a boom, which may be lowered and raised in and out of the car by means of a wire rope and winch. The material, fed to the buckets by shovels in the car, is delivered by means of a steel spout to a second fixed elevator which fills the bin. The distinct advantage of using two elevators is, first, it decreases the weight of the hinged part, and second, the material may be spread on the ground at each side of the pocket as a reserve storage, if possible.

Link-Belt Car Unloading Outfits are simple in construction and low in first cost and operating expense. Contractors, especially, will readily see the large savings in time and expense to be made by their use. Price, blueprints and all necessary information will be mailed upon request.



STATIONARY TYPE LINK-BELT CAR UNLOADER.



There's one "best" in every line, but that is not always best for everyone concerned. In the building trades

Ricketson's Mineral COLORS

are acknowledged to be the best choice for *Everybody*. Best for the architect because purest. Best for the contractor because they go farther. Best for the owner because they never change their color.

For Mortar, Brick, Cement, Stone, Etc.
Red, Brown, Buff, Purple and Black

RICKETSON MINERAL PAINT WORKS

MILWAUKEE, WIS.

Red, Brown, Buff and Black**MORTAR COLORS**

The Strongest and
Most Economical
in the Market.



Our Metallic Paints and Mortar Colors are unsurpassed in strength, fineness, and body, durability, covering power and permanency of color. Write for samples and quotations.

CHATTANOOGA PAINT CO.

Chattanooga, Tennessee

The market place of the building material industry. Employment department, machinery wanted and for sale, etc. If your wants are not answered in this page, write a letter to this office.

THE FRANCIS PUBLISHING CO.
537 S. Dearborn Street Chicago, Illinois

THE BOURSE

EMPLOYEES WANTED

WANTED—Manager for our building material department with knowledge of sanded hard plaster manufacture and face brick sales. Our business is jobbing and retail; we carry three men on the outside, one on specialties and two on staple material. Good salary to right person; location Indianapolis, position open any time to January 1st. Give details of self. Address Box 965, care ROCK PRODUCTS.

IMPORTANT EXECUTIVE POSITIONS CARRYING salaries \$2,500 to \$10,000 can be negotiated confidentially by high calibre executives who qualify; technical, professional, administrative; various lines. Send address in confidence to undersigned counsel for details. R. W. BIXBY, Lock Box 134-52, Buffalo, N. Y.

WANTED—Experienced superintendent with references by gypsum company located in Oakfield district. State salary. Address Box 959, care ROCK PRODUCTS.

WANTED—Reliable foreman for mixing department. EMPIRE GYPSUM CO., Rochester, N. Y.

WANTED—Experienced foreman or superintendent for a lime works in the eastern south. Address Box "X," care ROCK PRODUCTS.

EMPLOYMENT WANTED

WANTED.

Position as superintendent of lime or gypsum mining; strictly sober; thoroughly experienced. Address Box 101, care ROCK PRODUCTS.

WANTED—Position as superintendent or manager of crushed stone or lime plant; thoroughly practical and experienced and can give best of references. Use modern and efficient methods, and would be willing to work on a salary and bonus. Address "BOX 967, care ROCK PRODUCTS.

SUPERINTENDENT WANTS POSITION—Experienced in general quarrying, steam shovel and locomotive work. Am thorough mechanic, 35 years old and handle men successfully. References furnished. Will start at reasonable salary to prove ability. Address Box 948, care ROCK PRODUCTS.

WANTED.

Position as superintendent of gypsum plaster mill; have had 15 years' experience in the manufacture of all kinds of gypsum plasters, and superintendent of two mills; strictly temperate; best of references as to character and ability. CHARLES VERNIAUD, 944 Dorchester Ave., Grand Rapids, Mich.

WANTED—Position as superintendent or builder of large lime plant. High references—long experience. Address "Expert," care ROCK PRODUCTS.

PLANTS FOR SALE

FOR SALE: OR LEASE:

Limestone property, in Birmingham district. Entirely suitable for manufacture of crushed stone and burnt lime products. Two kilns on property. Located directly on railroad. Complete report by well-known geologist. Will bear investigation. Address "Birmingham Limestone," care ROCK PRODUCTS.

FOR SALE—Sand plant, finest in Missouri, on Missouri River between Kansas City and St. Louis; fully equipped with new barges and machinery, nothing better in the state. In full operation, doing fine business, old established trade, chance of lifetime to step into fine paying business at great bargain. Price \$75,000.00, worth \$100,000.00, part cash, balance city property or good farm. Address P. O. Box 588, Kansas City, Mo.

FOR SALE—Fully equipped high calcium limestone property. Three patent kilns, new crusher, electrical equipment, eastern Pennsylvania, good market, chemical and fluxing trade. Good opportunity for the right man. Address Box 968, care ROCK PRODUCTS.

Advertisements will be inserted in this section at the following rates:

For one insertion 25 cents a line
For two insertions 45 cents a line
For three insertions 60 cents a line

Eight words of ordinary length make one line.
Heading counts as two lines.
No display except the headings can be admitted.

Remittances should accompany the order. No extra charges for copy of paper containing the advertisement.

FOR LEASE.

Lime kilns, quarry, and operating equipment, in eastern Pennsylvania; capacity about 450 bushels daily; established trade and large demand for lime products. Address "Calcite," care ROCK PRODUCTS.

A SPLENDID OPPORTUNITY.

to the right man. A chance to make \$500.00 or more per month. Must be an experienced quarry and powder man, one who will take charge of the powder and blasting end of quarry and blast down sufficient stone to feed crushers producing 1,500 to 2,000 yards of crushed stone daily. Will contract on salary or yardage basis. First class references must accompany application. None but responsible parties need apply. Will require bond if contract is entered into. Address "A. B." care ROCK PRODUCTS.

SAND.

The largest, purest silica sand deposit in the world; coarse, sharp, white; analyzing 99.90% silica, balance moisture; on railroad, near water transportation. If interested in buying same, write R. L. MARTIN, Ocala, Fla.

CLAYWORKERS CASTINGS GREY IRON.

Foundry Castings—Prompt delivery. WM. E. DEE CO., Foundries & Machine Shops, Chicago and Harvey, Ill. All kinds of clay-workers castings, dies, dryer cars, grate bars, etc. Main office, 30 N. LaSalle St., Chicago, Ill.

FOR RENT—A piece of valuable property on which are three excellent lime kilns, and in addition to this, is a quarry containing large deposits of stone suitable for concreting, etc. This property is located on three railroads. Shipments can be made via Lehigh Valley, Jersey Central or Philadelphia & Reading. Plenty of land available for storage purposes. Unsurpassed opportunity for parties wishing to engage in the building supply business. Address L. F. GRAMMES & SONS, Allentown, Pa.

AN UNUSUAL OPPORTUNITY.

Wanted

A Man to Operate Lime Plant

or

Entire Plant for Sale.

A lime plant, consisting of three patent iron kilns, 210 acres of stone and timber land, 10 houses, one mile of railroad track, unlimited supply high grade limestone, situated in northwest portion of Arkansas, in Independence County, on Missouri Pacific Railroad, six miles from Batesville, in the mineral belt. Capacity of each kiln 150 barrels per day. Would like to have experienced man, with \$2,000 to \$3,000 operating capital, to manufacture and load lime on cars at plant, at a fixed price. He would use the operating capital to obtain supplies and operate commissary for his own account. Would sell plant reasonable and on satisfactory terms. Address CAPTAIN H. C. DANIELS, Little Rock, Ark. Write today for particulars.

MACHINERY WANTED

WANTED—Wood fibre machine—State make and condition and best price quoted for export shipment. A. E. KELLY, Port Clinton, Ohio.

Wanted—To buy two hardening cylinders, for Sand Lime Brick, 45 feet long by 78 inches diameter or one of same diameter 90 feet long. Give full particulars. Address Box 964, care ROCK PRODUCTS.

MOTOR TRUCKS FOR SALE

MOTOR TRUCKS.

New 1½ ton Harvey trucks made in Chicago and made right; designed by the best engineers; guaranteed by a responsible firm. WM. E. DEE CO., 435 So. LaSalle St., Chicago. Works: Harvey, Ill.

BUSINESS OPPORTUNITIES

TO LEASE—Fine crystal sand and gravel pit with new machinery, consisting of three drum hoisting engine, stone crusher, wash plant and cable bucket. Good market with railroad connections. For particulars address THE CRYSTAL SAND & GRAVEL CO., Battle Creek, Michigan, Rooms 5 and 6 Marjorie Block.

FOR SALE—Two number 8 Krupp ball mills in first-class condition. These with other material to be disposed of on account of change of equipment. Write SECURITY CEMENT & LIME CO., Hagerstown, Md.

FOR SALE—One C. O. Bartlett & Snow Co., Direct Heat Rotary Dryer, 36'x24'. Style M. Will sell for \$400.00 f. o. b. our works, blue print furnished. WINCHESTER GRANITE BRICK CO., Winchester, Ky.

CLASSIFIED

DEPARTMENT

CONTINUED

REAL BARGAINS

Porter 7x12 Dinkie 24 in. gauge (2) @ \$750.00
 Porter 9x14 Dinkie 36 in. gauge 850.00
 Baldwin 9x16 Dinkie 36 in. gauge (2) @ 900.00
 30 tons 35 lb. Rail and Splices 24.00
 45 tons 40 lb. Rail and Splices 24.00
 Baby Giant $\frac{1}{2}$ -yd. Traction Shovel 2,000.00
 Little Giant 14-yd. Traction Shovel 1,850.00
 Thew No. 0, Revolving Traction Shovel, $\frac{1}{2}$ -yd. 2,500.00
 Industrial 10-ton Loco Crane with 38-ft. boom and a 1-yd. Clam Shell A-1. 3,300.00
 Absolutely new Gates No. 7 $\frac{1}{2}$ and No. 5 Style "K" Crushers, Air Compressors, Pumps, Hoisting Engines, Derricks, Pile Drivers, Orange Peels and Clams.

Send for My Printed List of Offerings.

WILLIS SHAW

1216 Peoples Gas Bldg., CHICAGO

LOOK

1 NO. 0 THEW SHOVEL, 9 yd., on traction wheels.	\$2400
1 VULCAN SHOVEL, 1 $\frac{1}{2}$ yd., on traction wheels.	2000
2 GATES CRUSHERS, NO. 3, Style "D" Gyrotary.	425
2 GATES CRUSHERS, NO. 4, Style "D" Gyrotary.	525
1 AUSTIN CRUSHER, NO. 5, Practically new.	850
3 BELT HOISTS, Friction, 36x36, each.	150
1 HAYWARD CLAM SHELL, 1 yard.	300
1 HAYWARD ORANGE PEEL, 1 yard.	400
2 AMERICAN HOISTING ENGINES, 7x10, D. C., D. D., with boilers and swinging gears.	725
1 McMYLER LOCOMOTIVE CRANE, 35 ft. boom, with bucket. New last March.	3500
1 BROWNING LOCOMOTIVE CRANE, 50 ft. boom, with bucket. New last August.	4500
1 PORTER DINKY, 9x14, 36" gauge condition perfect.	890
1 RAND AIR COMPRESSOR, 10x14, belted, capacity 165 cu. ft.	300

WRITE

WILLIS SHAW MCHY CO.

INCORPORATED

NEW YORK LIFE BLDG., CHICAGO, ILL.

Black Marble Quarry
A Good Business Opening

The owner of an extensive Virginia deposit of black and gray marble would like to sell a half interest to an experienced man.

The marbles are adapted to high grade monument, column, interior finish and other work. Several car-loads have already been sold and purchasers have given duplicate orders.

The quarry is on the Southern Railway and has good shipping facilities.

If interested refer to File No. 46,543 and write

M. V. RICHARDS, Land and Industrial Agt.
Room 371, Southern Railway
WASHINGTON, D. C.

BIG BARGAIN

Complete STONE-CRUSHING AND PULVERIZING PLANT FOR SALE.

Plant operated less than three months and closed down because of dirty quarry. First class outfit consisting of:
 New 60x16 Boiler complete with stack and fittings.
 90 H. P. Engine.
 No. 4 Austin Gyrotary Crusher.
 50-ton Jeffery Pulverizer.
 Ingersoll-Rand Steam Drill.
 2000 feet Railroad Rails and Trestle Work.
 Rock Cars, Muck Cars, Hand Tools, etc.
 Flory Hoisting Engine, twin cylinder 20x24 drum.
 2000 feet Leschen's Steel Wire Rope.
 1 Set Bins, capacity 100 tons.
 Forge, Drill Press, etc., etc.
 Complete inventory to interested parties. Address

CHASE NURSERY COMPANY, Chase, Alabama



The DEALER is offered
CALVERT MORTAR COLOR
for its TRUE WORTH

To Himself, the Builder, the Owner and the Public

By its only maker

J. S. B. MACNEAL & CO.

DEPT. R.

Warner & Wooster Sts., BALTIMORE, MD.

A Trial WILL convince you

LOCOMOTIVE
Cranes
For All Purposes

1 Four Wheel 12 Ton American.
 1 Four Wheel 12 Ton McMyler Interstate.
 1 Eight Wheel 17 Ton McMyler Interstate.
 1 Four Wheel 12 Ton Industrial and others.

Steam Shovels, Drag Lines, Locomotives any size or capacity, Railroad and Construction Cars, all types.

Advise us your needs

A. C. TORBERT & COMPANY

First National Bank Building Chicago

Shearer & Mayer Drag-line Cableway Excavator

adapted for digging, conveying and elevating material from wet or dry pits.

SAUERMAN BROS.

ENGINEERS
and AGENTS1140 MONADNOCK
BLOCK, CHICAGO

Anchor Brand Colors

For Mortar, Cement and Brick
Brown, Black, Red and Buff
Strongest and Most Durable

Manufactured by C. K. Williams & Co.
Correspondence Solicited

Easton, Pa., U. S. A.



Stained with Cabot's Shingle Stains and lined with Cabot's Sheathing Quill. Robert W. Spencer, Jr., Architect, Chicago

Cabot's Building
Specialties

Crescote Stains for Shingles, Siding, Clapboards, Trimings, Boards, and all other Exterior Woodwork.
 Waterproof Cement and Brick Stains for waterproofing and artistically coloring cement and brick buildings.
 "Quill" for lining houses to keep out cold or heat, for sound-deadening in floors and partitions, and for insulating cold storage and refrigerators.
 Conservo Wood Preservative for preserving Posts, Planks, Sills and all other exposed timbers. Mortar Colors, Protective Paints for Metals, Waterproofing Compounds, etc.

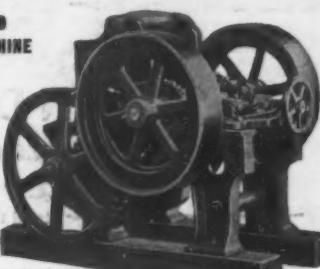
SAMUEL CABOT, Inc., Mfg. Chemists

BOSTON, MASS., U. S. A.

1123 Broadway,
New York24 West Kinzie St.
ChicagoMARTIN STONE CRUSHER
AND GRINDER BUILT
IN 4 SIZESIS A SAND
MAKING MACHINE

Maximum Capacity
No. 2
25 Tons
Daily

Maximum Capacity
No. 4
50 Tons
Daily



No. 2 Receiving Opening 12x5 inches
Weight 1,800 lbs. 3 Horse Power

Guaranteed and sent on ten days' working trial, send in your Order and pay after you have tried it out.

Limestone, Lime, Fieldstone, Flint, Marble, Granite, Sandstone, Oyster shells, Rock, Etc., can be reduced at one operation to the fineness of sand, or to $\frac{1}{2}$ ", $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " or $1\frac{1}{2}$ " for roads, concrete materials and fertilizing purposes.

H. MARTIN BRICK MACHINE MFG. CO.

Lancaster, Pa., U. S. A.

Crushers built in larger sizes also

WEBSTER J. LEWIS

GEOLOGICAL ENGINEER

EXAMINATIONS AND REPORTS
PROPERTIES AND RAW MATERIALS

HOTEL SAN MARCOS

CHANDLER, ARIZ.

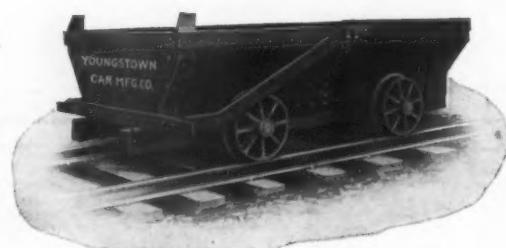
G. P. GRIMSLEY, Ph. D.

MINING AND CONSULTING GEOLOGIST

Formerly Ass't State Geologist W. Va.; Formerly Geologist on Ohio, Michigan and Kansas Geological Surveys; Ex-Manager National Lime-stone Company. Consulting Geologist National Lime-stone Company.

Examination, Reports, Consultation on development
Limestone, Clay, Gypsum and Coal.

Room 1105 Wyandotte Bid'g. : Columbus, Ohio



End Dump Quarry Car for Tipple Use

H. W. PICKETT CO., Eastern Representative, Philadelphia, Pa.
G. E. HILLSMAN, 857 Peoples Gas Building, Chicago, Illinois.

Quarry Cars

Of All Types

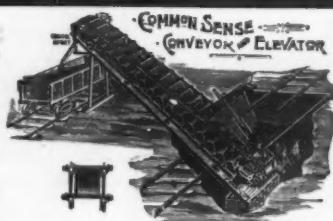
Designed and built to suit the conditions under which each car will operate, thereby getting greatest efficiency at minimum cost.

The Youngstown Car & Mfg. Co.

Youngstown, Ohio



Send for Catalog 25



THE GENERAL CRUSHED STONE CO.,

So. Bethlehem, Pennsylvania,

have been using one of our Common Sense Elevators for six years—capacity 400 tons an hour.

THE C. O. BARTLETT & SNOW CO. CLEVELAND OHIO

REINFORCED PLASTER BOARD

IS

Water-Proofed—Corrugated—Air-Celled
SAVES 50% of CEMENT PLASTER

Reinforced Plaster Board is waterproofed so the moisture of the cement is not absorbed, hence it **does not buckle**.

Reinforced Plaster Board is so corrugated and wired as to provide 3 times the necessary **reinforcement** to give it the proper rigidity, so it **does not crack**.

Reinforced Plaster Board is **much cheaper**, everything considered, than metal and wood lath.

Reinforced Plaster Board is supplied in sheets 48 inches by 48 inches and weighs 3 pounds to the square yard—**easily handled and applied**.

Reinforced Plaster Board is **economic** for use for **inside and outside use**.

Write today for free samples, catalog and prices. We welcome full investigation of contractors who are alive to opportunities for better buildings at lower cost.

THE PLASTIC PRODUCTS COMPANY

SUITE 1502 CENTRAL NATIONAL BANK BLDG. ST. LOUIS, MO.



“HENDRICK” Perforated Steel Screens and Elevator Buckets

Stand the Test

Let us figure on your requirements.

HENDRICK MFG. CO.

New York Office, 30 Church St.

CARBONDALE, PA.



“STAG” BRAND

Manganese Steel
CastingsEdgar Allen American Manganese Steel Co.
Chicago, Ill.

New Castle, Delaware

CLINTON METALLICPAINT CO.

CLINTON, N. Y.

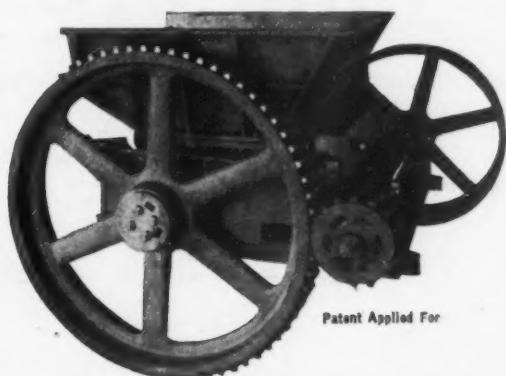
LARGEST AND OLDEST MANUFACTURERS OF

BRICK AND MORTAR

COLORING

Be sure you get the genuine with the "Little Yellow Side Label"
on each package

Let us tell you about Side-Walk Black.



SINGLE ROLL CRUSHERS

For Limestone, Phosphate Rock and Cinder, etc. Any Capacity from 5 to 500 Tons per Hour. More Easily Fed, Makes Less Fines than Either a Jaw or Gyratory Crusher. Information and Prices for the asking.

McLANAHAN-STONE MACHINE CO., Hollidaysburg, Pa.

FOUND AT LAST

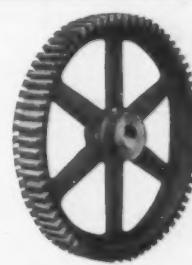


THE PERFECT STEAM SHOVEL CHAIN
"HERCULES SOLID WELD"
EVERY LINK AS STRONG AS THE SOLID BAR

Cannot come apart at welds. Made from tough high grade hammered iron.
The chain that lasts until entirely worn out.
No delays from broken chain. It is a marvel in rock work.

Made only by
THE COLUMBUS CHAIN COMPANY

Lebanon, Pa. Columbus, Ohio
Address all communications to COLUMBUS, OHIO

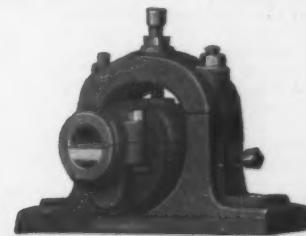


ELEVATING AND CONVEYING MACHINERY



H. W. CALDWELL & SON CO.

17th St. and Western Ave., Chicago
Hudson Terminal, 50 Church St., New York



ROCK PRODUCTS

Index to Advertisements

DECEMBER 22, 1913

Acme Cement Plaster Co.	57	Chase Nursery Co.	49	Hendricks Mfg. Co.	50	National Engineering Co.	30	Standard Scale & Supply Co.	81
Allen Amer. Manganese Steel Co., Edgar	50	Chattanooga Paint Co.	50	Howells Mining Drill Co.	10	National Lime & Stone Co.	12	Stephens-Adamson Mfg. Co.	81
Allis-Chalmers Mfg. Co.	7	Chicago Belting Co.	1	Hunt, Robt. W., & Co.	30	National Mortar & Sup. Co.	13	St. Louis Port. Cement Co.	29
Alpha Portland Cement Co.		Chicago Portland Cement Co.	29			National Plaster Board Co.	15	Sturtevant Mill Co.	15
American Clay Machine Co.	17	Classified Business Directory.	32			National Retarder Co.	16	Summit Silica Co., The.	30
American Fabric Belt Co.	12	Clayton Air Compressor Works				Niagara Gypsum Co.		Symons Bros. Co.	54
American Keene Cement Co.	1	Clinton Metallic Paint Co.	50	Imperial Belting Co.	32	Northwestern States Portland C. Co.	59		
American Locomotive Co.	5	Columbus Chain Co., The.	51	Improved Equipment Co.	18				
American Process Co.	18	Coplay Cement Mfg. Co.	2						
American Steel & Wire Co.	11	Cummer & Son Co., F. D.	73						
American Well Works.	4	Curry, J. P., Mfg. Co.	60						
Atlas Car & Mfg. Co.	60	Cyclone Drill Co., The.	10						
Atlas Portland Cement Co.	60	Davenport Loco. Works.	59						
Austin Mfg. Co.	9	Dexter Portland Cement Co.	1						
Automatic Weighing Machine Co.	55	Dull & Co., Raymond W.	11						
Bacon, C. Earle.	18	Dunning, W. D.	59						
Bartlett, The C. O., & Snow Co.	50	Ehrsam, J. B., & Sons Mfg. Co.							
Best Bros. Keene's Cement Co.	2	Electric Locomotive & Car Co., The.							
Bonnot Co.	9	Farnham "Cheshire" Lime Co.	18						
Books for the Trade.	56	Farrell Fdy. Mchy. Co.	18						
Bradley Pulv. Co.	8	Francis Mchy. Co.	50						
Buckbee, J. C., & Co.		French, Samuel H., & Co.	1						
Butterworth & Lowe.	9	Fuller Eng. Co.	32						
Cabot, Samuel, Inc.	46	Gardner Crusher Co.	7						
Caldwell, H. W., & Son Co.	51	Giant Plaster Board Co.	30						
Canada Cement Co.	2	Goodrich Co., The B. F.	53						
Canada Pebble Co., Ltd.	56	Grimsley, G. F.	50						
Carolina Portland Cement Co.	1	Gruendler, Pat. Crusher & Pulv. Co.	7						
Ceresit Waterproofing Co.	58								

Tell 'em you saw it in **ROCK PRODUCTS**

DECEMBER 22, 1913

Wadsworth, Howland & Co., Inc.	17	Wadsworth, Howland & Co., Inc.	17
Webster Mfg. Co.	32	Weller Mfg. Co.	15
West Jersey Bag Co.	29	West Jersey Bag Co.	29
Whitehall Cement Mfg. Co.	2	Whitehall Cement Mfg. Co.	2
Williams, C. K., Co.	49	Williams, C. K., Co.	49
Williams Patent Crusher & Pulverizer Co.	8	Williams Patent Crusher & Pulverizer Co.	8
Wolverine Portland Cement Co.	59	Wolverine Portland Cement Co.	59
Woodville Lime & Cement Co.	18	Woodville Lime & Cement Co.	18
Worrell, S. E.	18	Worrell, S. E.	18
Youngstown Car & Mfg. Co.	65	Youngstown Car & Mfg. Co.	65

CLASSIFIED BUSINESS DIRECTORY

TO OBTAIN ADDRESSES OF THE FOLLOWING FIRMS, LOCATE THEIR ADVERTISEMENTS BY REFERRING TO ADVERTISERS' INDEX.

BAGS AND BAG TYERS.

West Jersey Bag Co., The.
Miller & Co., Clifford L. (bag tyers).

BELTING.

American Fabric Belting Co.
H. W. Caldwell & Co.
Chicago Belting Co.
B. F. Goodrich & Co.
Imperial Belting Co.
Main Belting Co.
Stephens-Adamson Mfg. Co.
Webster Mfg. Company.
Weller Mfg. Co.

BUCKETS, DUMPING AND GRAB.

Atlas Car & Mfg. Co.
H. W. Caldwell & Co.
Hendrick Mfg. Co.
Willis Shaw.
Willis Shaw Mch. Co.
A. C. Torbet & Co.

CABLES.

American Steel & Wire Co.
Sauerman Bros.

CASTINGS.

Edgar Allen Amer. Mang. Steel Co.
Taylor-Wharton Iron & Steel Co.

CEMENT, HYDRAULIC.

Carolina Portland Cement Co.

CEMENT, PORTLAND.

Alpha Portland Cement Co.
Atlas Portland Cement Co.
Canada Cement Co.
Carolina Portland Cement Co.
Chicago Portland Cement Co.
Coplay Cement Mfg. Co.
Dexter Portland Cement Co.
French, Samuel H., & Co.
Kansas City Portland Cement Co.
Lehigh Portland Cement Co.
Marquette Cement Mfg. Co.
Northwestern States Portland Cement Co.
Ohio & Western Lime Co.
Phoenix Portland Cement Co.
Sandusky Portland Cement Co.
St. Louis Portland Cement Works.
Security Cement & Lime Co.
Standard Portland Cement Co.
Union Sand & Material Co.
Universal Portland Cement Co.
Vulcanite Portland Cement Co.
Whitehall Portland Cement Mfg. Co.
Wolverine Portland Cement Co.
Woodville Lime & Cement Co., The.

CHAINS.

Columbus Chain Co., The.
Jeffrey Mfg. Co.
Taylor-Wharton Iron & Steel Co.

CLAY PRODUCTS.

Improved Equipment Co.
Union Mining Co.

CLAYWORKING MCHY.

American Clay Mch. Co.
Bartlett, C. O., & Snow Co.

CONCRETE BLOCK MCHY.

Francis Machinery Co.
Eberling Cement Machine Co.

CONCRETE MOLDS AND FORMS.

Francis Machy. Co.
Read & Morrill.

CONCRETE MIXERS.

Jaeger Mach. Co.
Miscampbell, H.

COLORINGS, DRY AND MORTAR.

Samuel Cabot.
Chattanooga Paint Co.
Clinton Metallic Paint Co.
Macneal, James B., & Co.
Ricketson Mineral Paint Works.
Williams, C. K., & Co.

COMPRESSORS.

Clayton Air Compressor Co.

CONCRETE REINFORCEMENT.

American Steel & Wire Co.

CONVEYORS AND ELEVATORS.

Allis-Chalmers Manufacturing Co.
American Fabric Belting Co.
Austin Mfg. Co.
Bartlett, C. O., & Snow Co.
Caldwell, H. W., & Sons Co.
Dull, Raymond W., & Co.
Ehrsam, J. B., & Sons Mfg. Co.
Goodrich Co., The B. F.
Jeffrey Manufacturing Co.
Link Belt Co.
McLanahan Stone Machine Co.
Stephens-Adamson Mfg. Co.
Webster Mfg. Company.
Weller Mfg. Co.

CONSULTING GEOLOGISTS.

Grimsley, G. P., Ph. D.
Robt. W. Hunt & Co.
Lewis & Co., W. J.

CRUSHERS AND PULVERIZERS.

Edgar Allen Amer. Manganese Steel Co.
Allis-Chalmers Manufacturing Co.
Austin Mfg. Co.
Bacon, Earl C.
Bartlett, C. O., & Snow Co.
Bonnot Co., The.
Bradley Pulverizer Co.
Butterworth & Lowe.
Ehrsam, J. B., & Sons Mfg. Co.
Gardner Crusher Co.
Gruendler Patent Crusher & Pulverizer Co.
Jeffrey Manufacturing Co.
Kent Mill Co.
Lewistown Foundry & Machine Co.
Martin, Henry.
McLanahan Stone Machine Co.
Pennsylvania Crusher Co.
Power & Mining Mach. Co.
Raymond Impact Pulverizer Co.
Symons Brothers.
Sturtevant Mill Co.
Taylor-Wharton Iron & Steel Co.
Universal Crusher Co.
Williams Pat. Crusher & Pulverizer Co.

DRILLS.

Cyclone Quarry Drill Co.
Howells Mining Drill Co.
American Well Works.

DRYERS.

American Process Co.
Bartlett, C. O., & Snow Co.
Ruggles-Coles Eng. Co.
Worrell, S. E.

DUMP CARS.

Atlas Car & Mfg. Co.
Austin Mfg. Co.
Stephens-Adamson Mfg. Co.
Weller Mfg. Co.
Youngstown & Car Mfg. Co.

ENGINEERS.

Bacon, Earl C.
J. C. Buckbee & Co.
Dull, Raymond W., & Co.
Fuller Engineering Co.
Grimsley, G. P.
Robt. W. Hunt & Co.
Improved Equipment Co.
Lewis, W. J., & Co.
Meade, R. K.
Nat'l Engineering Co.
Sauerman Bros.
Schaffer Eng. & Equip. Co.
Seavers, Jas. B.
Smith & Co., F. L.

EXCAVATORS.

Raymond W. Dull Co.
Sauerman Bros.
Weller Mfg. Co.

FIRE BRICK.

Carolina Portland Cement Co.
Improved Equipment Co.
Union Mining Co.

FURNACES FOR SPECIAL PURPOSES.

Improved Equipment Co.

GAS AND GASOLINE ENGINES.

Cyclone Quarry Drill Co.
Novo Engine Co.

GEARS.

Caldwell, H. W., & Son Co.
Taylor-Wharton Iron & Steel Co.
Weller Mfg. Co.

GLASS SAND MACHINERY.

Lewiston Fdy. & Mach. Co.

GYPSUM—PLASTER.

Acme Cement Plaster Co.
American Keene Cement Co.
Best Bros. Keene's Cement Co.
Carolina Portland Cement Co.
Cottonwood Fibre Co.
Giant Plaster Board Co.
King, J. B., & Co.
National Mortar & Supply Co.
Niagara Gypsum Co.
Ohio & Western Lime Co.
Plymouth Gypsum Co.
Reeb, M. A.
U. S. Gypsum Co.

HAIR.

Ohio & Western Lime Co.

HYDRATING MCHY.

Kritzer, Co., The.
H. Miscampbell.

LIME.

Carolina P. C. Co.
Farnam-Cheshire Lime Co.
Kelley Island Lime & Trans. Co.
Mitchell Lime Co.
The Moore Lime Co.
National Lime & Stone Co.
National Mortar & Supply Co.
Niagara Gypsum Co.
Ohio & Western Lime Co., The.
Scioto Lime & Stone Co.
Security Cement & Lime Co.
Woodville Lime & Cement Co.

LIME, HYDRATED.

Kelley Island Lime & Transport Co.
The Moore Lime Co.
National Lime & Stone Co.
National Mortar & Supply Co.
Niagara Gypsum Co.
Ohio & Western Lime Co., The.
Scioto Lime & Stone Co.
Security Cement & Lime Co.
Woodville Lime & Cement Co., The.

LIME KILNS.

Improved Equipment Co.

LOADERS.

Jeffrey Mfg. Co.
Link Belt Co.
Weller Mfg. Co.

LOCOMOTIVES.

American Locomotive Co.
Davenport Locomotive Wks.
Willis Shaw.
Willis Shaw Mch. Co.
A. C. Torbet & Co.

MANGANESE STEEL.

Edgar Allen Manganese Steel Co.
Taylor-Wharton Iron & Steel Co.

METAL LATH.

Carolina Portland Cement Co.

PAINT AND COATINGS.

Samuel Cabot.
Chattanooga Paint Co.
Clinton Metallic Paint Co.
James B. Macneal & Co.
Ricketson Mineral Paint Co.
Trus-Con Laboratories.
Wadsworth-Howland Co.
C. K. Williams & Co.

PEBBLES.

Canada Pebble Co.

PERFORATED METALS.

Johnson & Chapman.
Hendrick Mfg. Co.

PLASTER.

See Gypsum.

PLASTER BOARD.

Giant Plaster Board Co.
National Plaster Board Co.
Niagara Gypsum Co.
Plastic Products Co.
Plymouth Gypsum Co.
U. S. Gypsum Co.

PLASTER MCHY.

Butterworth & Lowe.
Dunning, W. D.
Ehrsam, J. B., & Sons Mfg. Co.
Miscampbell, H.
Williams Pat. Crusher & Pulverizer Co.

QUARRY CARS.

See Dump Cars.

ROOFING MATERIAL.

Carolina Portland Cement Co.
Patent Vulcanite Roofing Co.

SAND.

Ottawa Silica Co.
Summit Silica Co.
Union Sand & Material Co.

SAND AND GRAVEL WASHING PLANTS.

Dull & Co., Raymond W.
Stephens-Adamson Mfg. Co.
Webster Mfg. Co.
Weller Mfg. Co.

SAND LIME BRICK MACHINERY.

Amer. Clay Machy. Co.

SCREENS.

Butterworth & Lowe.
Dull & Co., Raymond W.
Ehrsam, J. B., & Sons Mfg. Co.
Hendricks Mfg. Co.
Johnston & Chapman Co.
McLanahan Stone Machine Co.
National Eng. Co.
Stephens-Adamson Mfg. Co.
Sturtevant Mill Co.
Webster Mfg. Company
Weller Mfg. Co.

STEAM SHOVELS.

Edgar Allen Amer. Manganese Steel Co.
American Locomotive Co.
Contractors Mach. & Sup. Co.
The Marlon-Osgood Co.
Willis Shaw.
Willis Shaw Mch. Co.
A. C. Torbet & Co.

SINK AND FLOAT TESTERS.

Pennsylvania Crusher Co.

STEAM SHOVEL TEETH.

Edgar Allen Amer. Manganese Steel Co.
Taylor-Wharton Iron & Steel Co.

STUCCO RETARDER.

National Retarder Co.

TIRES—RUBBER.

B. F. Goodrich Co.

TUBE MILLS.

Allis-Chalmers Manufacturing Co.
Smith & Co., F. L.

WAGONS.

Troy Wagon Wks. Co., The

WATERPROOFING.

Cabot, Samuel, Inc.
Carolina Portland Cement Co.
Ceresit Waterproofing Co.
Maumee Chemical Co.
Sandusky Portland Cement Co.
Trus-Con Laboratories
Wadsworth, Howland & Co., Inc.

WEIGHING MACHINES.

Automatic Weighing Machine Co.
Sturtevant Mill Co.

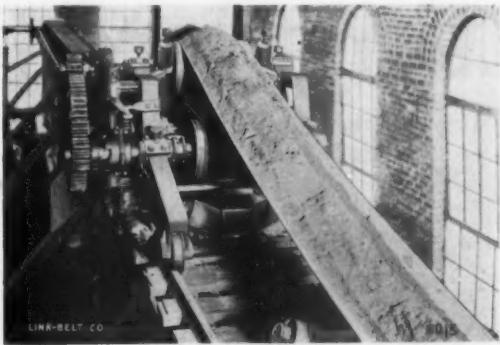
WOOD PULP.

Cottonwood Fiber Co.
Niagara Gypsum Co.
Plymouth Gypsum Co.



A Word to Purchasers of Conveyor Belts

There is no such thing as *competition*, as it is usually understood, in purchasing conveyor belts. The common inquiries for a sample the weight of duck, and the "friction" give no real information which can be used as a basis of comparison. Two samples identical in all physical tests that can be made at the time of purchase may differ so in their ingredients as to bear no resemblance whatever after six months. This is equally true of the "friction." The actual weight of the duck is of much less importance than its character and distribution. The purchaser is entirely dependent upon the experience, skill and disposition of the party furnishing the belt, and as there can be no comparison of character or quality of belt, so there can be no comparison of price. Belts should invariably be purchased of a company that has had experience in their use, and a reputation for maintaining the quality of its product.



Belt Conveyor Handling Sand

For upwards of twenty-five years we have recommended, manufactured and installed large numbers of belt conveyors for uses to which they were adapted; and from our long experience, manufacturing facilities, design of equipment, and quality of belts, has resulted the same superiority that has always characterized our other products.

Write for our Belt Conveyor
Book No. 79

LINK-BELT COMPANY

PHILADELPHIA

CHICAGO

INDIANAPOLIS

New York 299 Broadway
Boston 131 State Street
Pittsburgh 1501-3 Park Building
St. Louis Central Nat'l Bank Bldg.
Buffalo 698 Ellicott Square
Seattle 512½ First Avenue, S.
Cleveland 1304 Rockefeller Bldg.
Wilkes-Barre Second Nat'l Bank Bldg.
Denver Lindroth, Shubart & Co.
San Francisco N. D. Phelps, Sheldon Bldg.
New Orleans Wilmot Machinery Co.
Los Angeles 204 N. Los Angeles Street
Minneapolis Link-Belt Supply Co.
Birmingham General Machinery Co.

MOTOR TRUCK EXPENSE RECORD

Tire Dimensions Front _____
Rear _____

REPAIRS AND REPLACEMENTS

BATTERIES BODY TIRES

For Am. Wheel Cost

Time Lost

Cut Out
the use of
this Column
—so far as tires are concerned

—by equipping your motor trucks with the tires that are giving the "No Time Lost" service.

Your motor truck is a part of your revenue-producing equipment. It means "service"—a real asset in your business, provided you "keep it going" all the time.

During September 705 Goodrich Tires were put on to replace other makes by owners who desire the "continuous service" of

GOODRICH WIRELESS TRUCK TIRES

This means that a possible 250 truck owners have decided to try Goodrich Wireless Truck Tires. If your trucks are giving irregular service because of tire trouble, have Goodrich Wireless Tires applied and enjoy real tire satisfaction.

What Goodrich Wireless Truck
Tires are doing for these men,
they will do for you

If you are interested in keeping track of the performance of your truck we shall be glad to send you a copy of our Motor Truck Expense Record. A postal will bring it.

The B. F. Goodrich Co.

Everything That's Best in Rubber

Factories:
Akron, Ohio



Branches in all
principal cities

*There is nothing in Goodrich Advertising that
isn't in Goodrich Goods*

WANTED: Live Dealers for a Live Line. It will only cost you a letter and a little time to write for full information regarding our attractive proposition to live dealers. We will reply in detail and convince you that we have the best line of Waterproofings, Dampproofings, and Technical Paints in the World.

If you are in business for profit and satisfied customers, you want this information for you need The Trus-Con Line. Act quickly as territory is being rapidly taken up.

THE TRUS-CON LABORATORIES

26 Trus-Con Building :: :: :: Detroit, Michigan

Waterproofings, Dampproofings, Technical Paints



The Symons Pulsating Screen

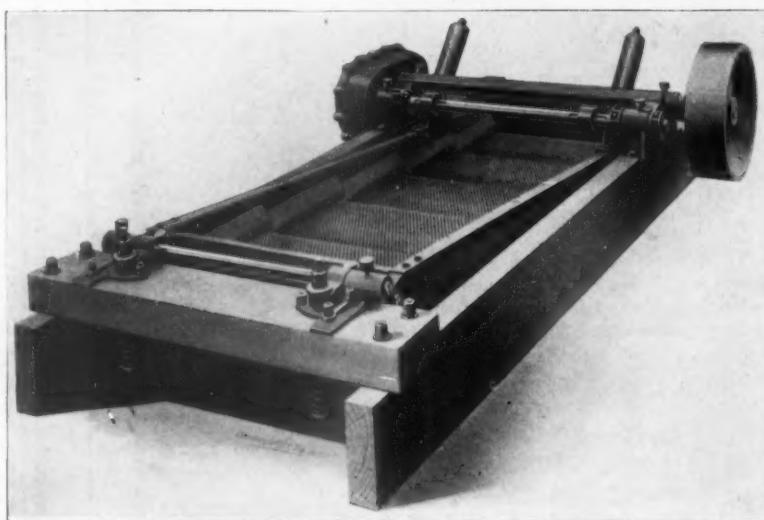
Cleans Material Which Clogs Other Screens

Advantages are:

1. Sets level.
2. Spring supported.
3. Thorough cleaning.
4. Large capacity.
5. Rapid action. Quick upward and forward toss combined with slower downward and backward movement.
6. Material moves in pulsating flow along screen.
7. Pressure in one direction only on bearings. No knocking.
8. Operating parts incased in dust-proof oil tank.
9. Quick replacement of screen sections.
10. Special provision for holding wire screen taut.
11. Equipped with automatic feed if wanted.

The following sizes are standard: Widths, 24 in., 36 in., 48 in., and any one of the following lengths: 5 ft. 3 in., 7 ft., 8 ft. 9 in., 10 ft. 6 in., 12 ft. 3 in.

Sizes to suit special requirements made to order.



SYMONS BROTHERS COMPANY

Disc Crushers, Gyratory Crushers, Screens, Elevators, Etc.

Old Colony Building, Chicago



THE LOGICAL LATHING MATERIAL
THE BEST IN GYPSUM PLASTER

U. S. G. PRODUCTS—“THE PROGRESS OF THE GYPSUM INDUSTRY”



PYROBAR GYPSUM TILE

Recognized highest standard of efficiency
in Fire-Proofing

KING'S WINDSOR CEMENT FOR PLASTERING WALLS AND CEILINGS

Buffalo Branch, CHAS. C. CALKINS, Manager
322 W. Genessee Street.

Not the hardest, but the toughest and best Wall Plaster made—Can be applied with less labor. Has greater covering capacity than any other similar material

J. B. KING & CO., 17 State Street, New York.

AUTOMATIC WEIGHING MACHINE COMPANY High Grade Automatic Scales

No. 134-140 Commerce Street

NEWARK, N. J.

PEERLESS

means without an equal and that is what our products are beyond the shadow of a doubt.

Peerless Plaster-Board

The Best on the Market To-day

Peerless Plaster Board has no superior on the market today. Strength, durability, and uniformity in thickness with clean cut edges are its chief virtues.

Peerless Plaster Board finished with Peerless Plaster make a Peerless Wall. Builders' Supply Retailers say it is the best Plaster Board manufactured. If you are "from Missouri" write us today for sample and prices.

Write today for our
PEERLESS PROPOSITION



Peerless Cement Plaster
Peerless Wood Fibre Plaster
Peerless Sanded Plaster
Peerless Ready Finish
Peerless Portland Stucco
(Exterior Plastering)

We Ship Mixed Cars
of Plaster and Board

Peerless Plaster Board comes in sheets 32 inches by 36 inches.

Peerless Plaster Board is a fire retardant and an efficient sound deadener.

Peerless Plaster Board is a non-conductor of heat and cold.

Peerless Plaster Board is an insurance against cracks, buckles, and lath stains.

Get in line with
THE PEERLESS LINE
WRITE TODAY

M. A. REEB, : Buffalo, New York

CANADA PEBBLES

Carefully selected
as to size.
Best shapes.
Will not break or
flake in Tube Mill.

CANADA PEBBLE CO., Limited

*Highest Grade Grinding
Pebbles for Tube Mills*

General Offices
PORT ARTHUR
Ontario, Canada

Branch Office
CHICAGO, ILL.
537 S. Dearborn St.

Years of Experience
are back
of

Jeffrey Vibrating Screens



They embody every essential feature in Design and Construction that tends to give a maximum output of correctly sized material with the least labor and expense.

They handle successfully great varieties of material.

The action of the screen is thorough.

The tailings are clean.

The feed is uniformly distributed across face of screen.

The feed is adjustable for a range wide enough to suit the capacity of the machine for any material.

Single, Double or Triple Screening surfaces may be used.

Send for our Interesting Bulletin No. 69-E, giving complete information.

Jeffrey Mfg. Co., Columbus, Ohio

New York Boston Philadelphia Pittsburgh
Charleston, W. Va. Birmingham Chicago Denver
Cleveland Montreal

BOOKS FOR THE TRADE

Cement Users

Portland Cement for Users
Henry Faige and D. B. Butler. Price \$1.20. C
Cements, Mortars and Concrete
Myron C. Falk. Price \$2.50. C
Reinforced Concrete
W. H. Gibson and W. L. Webb. Price \$1.00. C
Hand Book of Cost, Data
Halbert P. Gillette. Price \$4.00. C
Concrete Construction
H. P. Gillette and C. S. Hill. Price \$5.00. C
Cement Workers' and Plasterers' Ready Reference
H. G. Richey. Price \$1.50. C
Reinforced Concrete
A. W. Buel and C. S. Hill. Price \$5.00. C
Concrete
Edward Godfrey. Price \$2.50. C
Reinforced Concrete
C. F. Marsh and Wm. Dunn. Price \$7.00. C
Practical Treatise on Foundations
W. Patton. Price \$5.00. C
Concrete
Thomas Potter. Price \$3.00. C
Cement and Concrete
Louis C. Sabin. Price \$5.00. C
Concrete and Reinforced Concrete Construction
Homer A. Reid. Price \$5.00. C
Handbook on Reinforced Concrete
F. D. Warren. Price \$2.50. C
Popular Handbook for Cement and Concrete Users
Myron H. Lewis & A. H. Chandler. Price \$2.50. C
A Manual of Cement Testing
Richards & North. Price \$1.50. V
A Treatise on Cement Specifications
Jerome Cochran. Price \$1.00. V
Manual of Reinforced Concrete and Concrete Block Construction
Chas. F. Marsh and Wm. Dunn. Price \$2.50. V

Cement and Lime Manufacturers

Bungalows, Camps and Mountain Houses
Price \$2.00. C
Limes, Cements and Mortars, Concretes, Mastics, etc.
G. R. Burnell. Price \$0.60. C
Instructions to Inspectors on Reinforced Concrete Construction
Geo. P. Carver. Price \$0.50. C
Cements, Limes and Plasters
Edwin C. Eckel. Price \$0.00. C
Practical Treatise on Limes, Hydraulic Cements and Mortars
Gen. Q. A. Gillmore. Price \$4.00. C
Mortars, Plasters, Stuccos, Concretes, Portland Cements and Compositions
F. Hodgson. Price \$1.50. C
Concrete Factories
Robert W. Lesley. Price \$1.00. C
Portland Cement: Composition
Richard K. Meade. Price \$4.50. C
Manufacture of Concrete Blocks
Wm. M. Torrence and others. Price \$1.50. C
Practical Cement Testing
W. Purdon Taylor. Price \$3.00. C
Foundation and Concrete Works
E. Dobson. Price \$0.60. C
Reinforced Concrete, Mechanic and Elementary Design
John P. Brooks. Price \$2.00. C
Concrete and Stucco Houses
O. C. Hering. Price \$2.00. C
Concrete Costs
Taylor-Thompson. Price \$5.00. C

Architects and Engineers

Building Construction and Superintendence—Masonry Work
F. E. Kidder. Price \$6.00. C
Theory of Steel-Concrete Arches and Vaulted Structures
Wm. Cain. Price \$0.50. C
Concrete Country Residences
Price \$1.00. C
Graphical Handbook for Reinforced Concrete Design
John Hawkesworth, C. E. Price \$2.50. C
Theory and Design of Reinforced Concrete Arches
Arvid Reuterdahl. Price \$2.00. C
Treatise on Concrete, Plain and Reinforced
F. W. Taylor and S. E. Thompson. Price \$5.00. C
Concrete Steel
W. N. Twelvetrees. Price \$1.90. C
General Specifications for Concrete Work as Applied to Building Construction
Wilbur J. Watson. Price \$0.50. C
Rocks, Minerals and Stocks
F. H. Smith. Price \$1.50. C
Strength of Materials
Edward R. Maurer. Price \$1.00. C
Highway Construction
Austin T. Byrne and Alfred E. Phillips. Price \$1.00. C
Refrigeration
Chas. Dickerman and Francis H. Boyer. Price \$1.00. C
Plumbing
Wm. Beall, Gray and Chas. B. Ball. Price \$1.50. C
Estimating
Edward Nichola. Price \$1.00. C
Building Superintendence
Edward Nichola. Price \$1.50. C

ROCK PRODUCTS,

537 South Dearborn Street,

CHICAGO

Tell 'em you saw it in **ROCK PRODUCTS**



M-O "43" 1 1/2-yd. Traction Shovel. Stone Quarry of John D. Owens & Son, Owens, Ohio.

STEAM SHOVELS

DIPPER DREDGES

BALLAST UNLOADERS

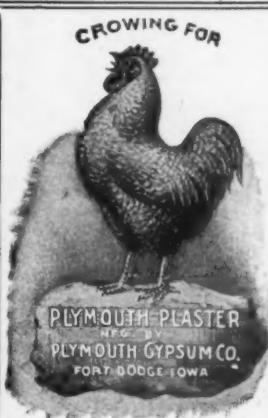
M-O "120" 6-yd. Shovel

Equipped with 4-yd dipper, in stock for immediate shipment. Shipping weight, 120 tons.

THE MARION-OSGOOD COMPANY

Eastern Office:
51 STATE STREET, ALBANY, N. Y.

Marion, Ohio, U. S. A.



CROWING FOR
PLYMOUTH PLASTER
WOOD FIBER PLASTER
PLYMOUTH FIREPROOF
PARTITION BLOCKS
SACKETT PLASTIC BOARD
STEEL STUDDING
THE QUALITY BRANDS
WRITE US FOR PRICES AND
ADVERTISING MATTER
Plymouth Gypsum Co.
Fort Dodge, Iowa

"National Brand" Plaster Board

The Modern Lath

Combines Great Strength and Lightness. Cuts and Nails Easily. Makes Perfect Bond with Plaster. Fireproofs, Sound-Deadens and Insulates. Can Be Used as "Wall Board."

Inquiries from Dealers Solicited.

National Plaster Board Company

1408 Rockefeller Building
Cleveland, Ohio

ACME

E S T A B L I S H E D 1 8 8 9

Acme Cement Plaster has been on the market for nearly a generation. Dealers have handled it continuously for twenty-five years and they are as jealous as ever of their Acme Agencies.

*Acme has reputation and quality
never imitated.*

Acme Cement Plaster Co. St. Louis, Missouri

ACME MILLS:
Acme, Texas
Acme, New Mexico
Acme, Oklahoma
Laramie, Wyo.

GYPSUM MILLS:
Grand Rapids, Mich.
Los Angeles, Cal.
Gypsum, Oregon

GYPSUM MINES:
Ft. Dodge, Iowa
Cement, Okla.
Winslow, Ariz.

Tell 'em you saw it in ROCK PRODUCTS

Investigation and Experience Are Proving the Reliability of



Waterproofing Compound

Architects, Engineers and Contractors everywhere are being interested in and are investigating the worth of Ceresit as a waterproofing.

Experience and actual application are proving to them beyond shadow of doubt that Ceresit is reliable, permanent and harmless.

Dealers, you are as much interested in handling such a waterproofing as your customers are in specifying it.

Investigate! Write for our "Book of Evidence" which gives the complete facts.

And remember, Ceresit is being used not only for protecting concrete, cement mortar and stucco against moisture and slight ground water pressure but also for rendering concrete and cement mortar thoroughly waterproof against high hydrostatic pressures as in swimming pools, water towers, sewers, etc.

We may not have a dealer in your city—this is your opportunity

Write for a copy of the "Book of Evidence"

CERESIT WATERPROOFING COMPANY

924 WESTMINSTER BUILDING, CHICAGO, ILL.

FACTORIES:

Chicago, U. S. A.

Uana, Germany

Warsaw, Russia

Paris, France

Vienna, Austria

London, Eng.



Real Belting Service

OUR plan for selling Leviathan and Anaconda belting makes it absolutely impossible for you to lose. It is founded on a fair, square, common-sense basis.

Write our nearest house for facts you will be glad to know.



MAIN BELTING COMPANY

Philadelphia

New York
Pittsburgh

Chicago
Seattle

Boston
Birmingham

MAIN BELTING CO. OF CANADA, Ltd.
Montreal

Toronto

Calgary

Tell 'em you saw it in ROCK PRODUCTS

Stop!—Look!!—Listen!!! The Big-An-Little-Mixer A MIX A MINUTE



If so, think of every possible advantage you could ask for or desire in a Small Batch Mixer. Check them over against the "BIGANLITTLE" and you will find them all present. Try it.

First crack out of the box, you want.

A Mixer that really mixes—A Mixer where you see what's going on—A Mixer that mixes all kinds of material—A Mixer that runs easy and takes little power—A Mixer that is easily loaded and unloaded—A Mixer that is easily cleaned—A Mixer that is strong and durable—A Mixer that will save you money—A Mixer that you buy at the right price.

If you are a contractor on big and little jobs, write us for more information about this "BIGANLITTLE" Mixer, which will be a surprise for you on big and little jobs, as this mixer is both big and little—big in results and little in size.

We have recently purchased the Basis U. S. Letters Patent No. 782,700 February 14, 1905. Buy a "Big-an-Little" mixer and play safe.

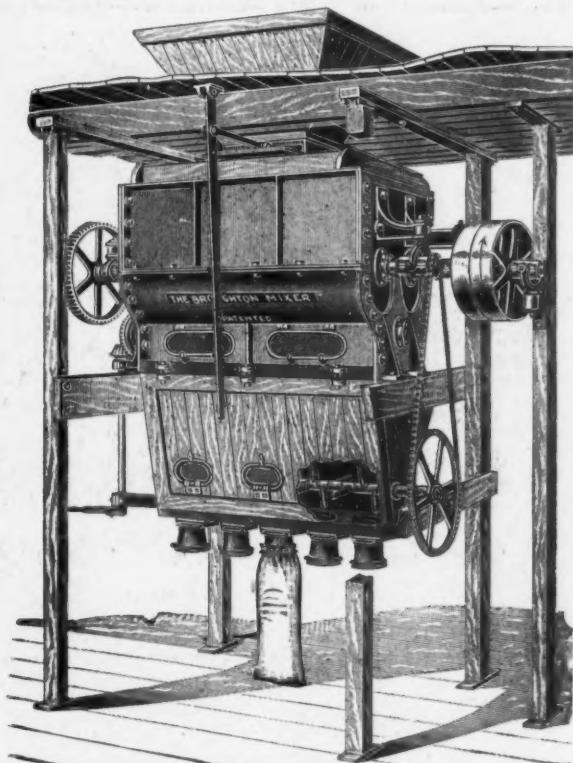
Smaller than other Big Mixers Larger than other Small Mixers

Write for Catalog A-1

The Jaeger Machine Co., 216 West Rich Street,
COLUMBUS, OHIO

Eastern Representative: E. B. KELLEY CO., 50 Church St., New York City.
Pacific Coast Representative: THE EDWARD R. BACON & CO., San Francisco, Calif.





The most thorough and efficient
Mixers of Plaster, Cement and
Dry Materials. Send for Circular.

W. D. DUNNING, Water St., Syracuse, N.Y.

Northwestern Portland Cement

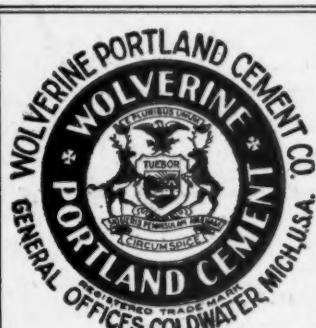


The Reliable Portland
Cement

A Portland Cement
for the

NORTHWEST

NORTHWESTERN STATES PORTLAND CEMENT COMPANY
MASON CITY, IOWA



"WOLVERINE"

The Alright Cement

MADE RIGHT SOLD RIGHT
WORKS RIGHT WEARS RIGHT

The Best is None Too Good For You.
Insist Upon

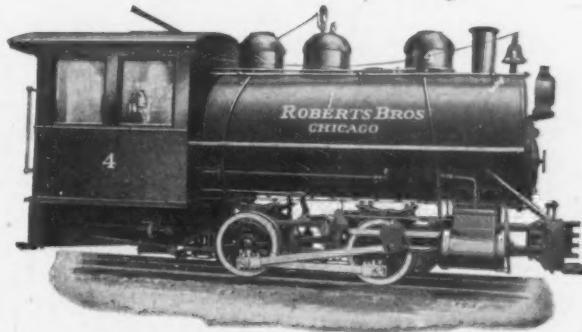
"WOLVERINE"

Write for Booklet and Quotations.
Factories at Coldwater and Quincy, Mich.
Capacity 3500 Daily.

WOLVERINE PORTLAND CEMENT COMPANY
W. E. COBEAN, Sales Agent,
Coldwater Michigan

Main Office, Coldwater, Mich.

Do You Have Cars to Haul? The Davenport Locomotive Will Save Money



Special Designs for Special Purposes
Any Size, Any Gauge, Any Weight
Write for Prices and Particulars

DAVENPORT LOCOMOTIVE WORKS

DAVENPORT, IOWA

BRANCH OFFICES:

Chicago, 12 and 14 So. Canal St.
Seattle, 617 Western Ave.

St. Louis, 654 Peirce Bldg.

New York, 30 Church St.
St. Paul, 1308 Pioneer-Press Bldg.

Cincinnati, O., 703 1st Nat. Bank Bldg.

Canadian Representatives:

F. H. Hopkins & Co., Montreal, Que.,
Dominion Equipment & Supply Co., Winnipeg, Man., Edmonton, Alta.

When You Build—Build Forever

CONCRETE BUILDINGS are permanent.

There are unlimited possibilities in CONCRETE construction.

Anything that can be built can be built better of CONCRETE.

PORTLAND CEMENT is the 20th Century building material.

Marquette Portland Cement
made from rock sets a higher standard



Sound - Strong - Uniform

Marquette Cement Mfg. Co.
Marquette Building CHICAGO, ILL



No. 217-H Rocker Side Dump Car
Also made in end dump. Above car made for loading with steam shovel.



No. 805
Dumping Stone Carrier.

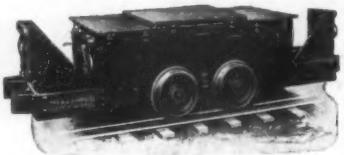
Reduce Your Handling Costs

BY USING
ATLAS CARS AND LOCOMOTIVES

Where a trolley wire or third rail is undesirable investigate our storage battery locomotives. Made in several styles and sizes. Cars to suit every requirement.

THE ATLAS CAR & MFG. CO.
909 Marquette Road
Department 6

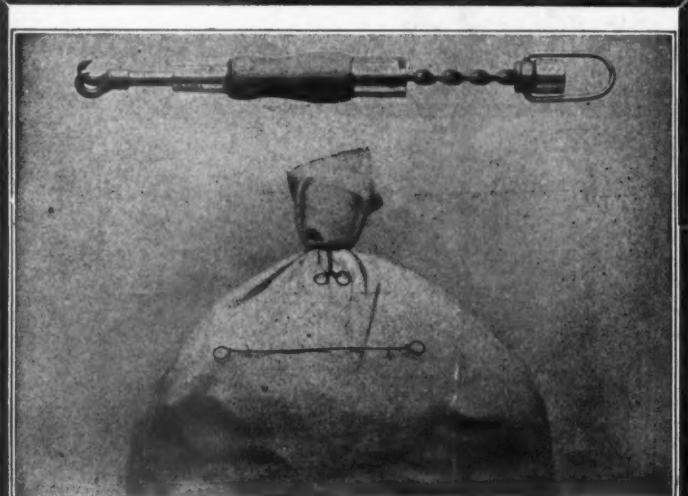
Cleveland, Ohio



No. 5750—Storage Battery Locomotive
made in several sizes.



No. 274
End Dump Quarry Car.



THE CURRY BAG TYER

IS SENT ON 30 DAYS' TRIAL

It has proven in hundreds of cement, plaster, lime, and other bagging concerns, for over three years, that its security and efficiency are far greater than any possible use of twine.

Test it without cost.

Catalog E and Prices

J. P. CURRY MFG. CO., Inc. 110 East 23rd St
NEW YORK CITY

(Formerly Curry Bag Tyer Dept. of Clifford L. Miller & Co.)

The cement in the bags which bear this trade-mark—
is its own best advertising.
Atlas is more than a name—it's
a reputation which others strive
to equal. (Watch this space!)

